

OBSERVATIONS OF COMETS,

FROM B.C. 611 TO A.D. 1640.

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EXTRACTED FROM THE CHINESE ANNALS.

TRANSLATED, WITH INTRODUCTORY REMARKS,

AND

An Appendix,

COMPRISING THE

LESS NECESSARY FOR REDUCING CHINESE TIME TO EUROPEAN RECKONING;
AND A CHINESE CELESTIAL ATLAS.

BY

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ETC. ETC.

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TO

WILLIAM LASSELL, ESQ. F.R.S.

PRESIDENT,

AND TO THE FELLOWS OF THE ROYAL ASTRONOMICAL SOCIETY,

THIS WORK

IS RESPECTFULLY INSCRIBED.

P R E F A C E.

A FEW years since, when Sig. Schiaparelli announced his discovery of the probable connexion between the orbits of certain Comets and those of the periodical Meteors, the well-known Astronomer, Mr. J. R. Hind, took up the subject, and in the course of his investigation found, among the comets recorded in M. E. Biot's '*Catalogue des Comètes observées en Chine depuis l'an 1230 jusqu'à l'an 1640 de notre ère,*' &c., which forms a supplement to the '*Connaissance des Temps*' for 1846, one, whose orbit appeared to answer the required conditions. It is that of October 25, 1366, and is No. 295 of the succeeding Catalogue. But the path of that comet, as given by Biot, was apparently so extraordinary, that he was induced to conclude that some error had occurred, either in the original text or in the translation. Thus the comet is described as having appeared near one of the stars in Ursa Major, whence it passed in a south-easterly direction through several of the stellar divisions, until, on October 29, it was in a certain place in Aquarius; but on October 30 it was again in Ursa Major, in the same place as at first: whence it once more pursued a similar south-easterly course to the same place in Aquarius and disappeared.

Mr. Hind consequently applied to me, to know whether this discrepancy could be accounted for by reference to the original text in the Supplement to the '*Encyclopædia*' of Ma Twan Lin. Upon carefully examining this, I found that there were really *two* distinct accounts of the course of this comet; the one giving its path through the stellar divisions, and the other describing the asterisms near or through which it passed in that course; and, reading the account according to this version, the whole became perfectly consistent, and Mr. Hind was enabled to bring his investigation to a satisfactory close.

This led to an examination of Biot's Catalogue, and I quickly found, that although very accurate in its details, it was by no means so complete as

could be wished ; many comets being recorded in the ' Encyclopædia ' of Ma Twan Lin, and in the great historical work called the ' She Ke,' that are not noticed by him. It therefore appeared to me, that a Catalogue comprising the whole of the observations of the comets contained in the two Chinese works just mentioned, translated from the original, and arranged chronologically, with an explanation of all the particulars connected with them, might be of some service to astronomers, particularly to those engaged in cometary researches.

Such was the origin of the present work ; and as during its compilation many other interesting particulars relating to Chinese astronomy presented themselves, I have been induced to incorporate the principal of them with the Introductory Remarks, which immediately follow.

It was likewise absolutely necessary for the finding the dates, &c. of the various observations, that certain Tables should be constructed, by which Chinese time could be reduced to our reckoning. These will be found in the Appendix, and consist of a complete set of Chronological Tables, giving the succession of the Dynasties and Emperors from the earliest period to the present time ; and of other Tables for finding the Months or Moons, and Days. Instructions for using these Tables are given in the Introductory Remarks, and they will be found of great service, not only to astronomers but also to persons engaged in historical or numismatic investigations, as they will find in them all they require to ascertain the various dates, as far as regards China proper. I have also included in the Appendix a complete Chinese Celestial Atlas, from an original work, so that the names and relative positions of the asterisms and stars can be readily found.

I may also express my conviction that this Catalogue will be found as complete as any that has hitherto appeared, if not more so. It has likewise the advantage of being a work *per se*, and, consequently, will appear in the library or in catalogues as a separate work, and not as forming a portion of any other publication.

INTRODUCTORY REMARKS.

THE progress of Astronomy among the Chinese is a subject of the highest interest, whether it be considered as recording observations of the heavenly bodies made by one of the most ancient and primitive races of mankind, which appears in extremely remote times to have advanced to a high degree of civilisation; peculiar, however, to itself; and which has preserved the manners and customs established by its early rulers, more than two thousand years before the Christian era, in a great measure unaltered to the present day. Or whether the fact that at a period long anterior to the commencement of civilisation among the Western nations, and when (with the exception, perhaps, of the Egyptians and Assyrians) almost universal barbarism prevailed among them, Astronomy had been carried to a great degree of perfection by the Chinese, as manifested by their still existing records, whose authenticity is not only strongly asserted by that people, but is acknowledged by some of the most eminent European scholars of the present day.

In their later records, in addition to a vast amount of valuable historical and other information, we find chapters devoted exclusively to their astronomy: in which are detailed their arrangement and classification of the stars; observations of the sun, moon, and five planets; notices of eclipses, falling stars, and other extraordinary phenomena: among which those of comets, which are extremely numerous, and which frequently are minute in the description of the times and places of their appearance, and of the paths they pursued in the heavens, are perhaps the most interesting to modern astronomers.

As far as my experience goes, it is not easy to find a complete record of these observations in any European language; and if such does exist, it is contained in publications not readily accessible to the general reader. Pingré, in his '*Cométographie*,' quotes lists of Chinese comets by Mailla and Gaubil. Mailla's list was taken from the Chinese historical work called '*Tung Keen Kang Muh*,' which he translated, and of which I possess a copy, which is occasionally referred to in the following work. That by Gaubil is said by Pingré to have been in MS., and to have been preserved in the library of the *Depôt de la Marine*. I have been unable to ascertain whether this MS. is still in existence, or whether, as is highly probable, it was lost in the early days of the French Revolution. Under any circumstances, it does not appear at present to be easily accessible to the general inquirer. The important lists in the '*She Ke*' and in the '*Encyclopædia*' of Ma Twan Lin do not appear to have been known to Pingré. The Catalogue by M. E. Biot, published in the '*Connaissance des Temps*' for 1846,

although very accurate, is by no means so complete as could be wished, many observations of comets being passed over without notice.

The remarks which follow are intended to supply certain desiderata, which appear to be essential to the full comprehension of the observations which form the subject of this work. They consist principally of,—

Firstly, A brief account of the early astronomy of the Chinese, extracted entirely from original sources, chiefly historical.

Secondly, An explanation of the means to be employed in reducing Chinese time to our reckoning, including all particulars relating to the dates of the Emperors who were reigning when the comets described appeared, such as the years of their reigns and epochs; and the dates of the Moons or Months, and Days referred to in the descriptions, and an explanation of so much of the Chinese calendar as may be needed for the understanding the mode of their reduction; together with the requisite Tables for that purpose.

Thirdly, An explanation of the astronomical portion of the observations, showing the mode of ascertaining the various asterisms and stars mentioned as occurring in the paths of the comets, as they are described in the Chinese lists and maps of stars, with other particulars relating to them necessary to be noticed.

Fourthly, An explanation of the plan followed in the translation and arrangement of these observations.

These, it is confidently hoped, will render the work intelligible to the general reader.

According to Chinese tradition, the introduction of astronomical observations is to be attributed to Shin Nung, the immediate successor to Fuh He, the founder of the empire. The reign of Shin Nung commenced about B.C. 3253.

It is also related that the Emperor Hwang Te, B.C. 2698–2598, was the monarch who introduced the system of reckoning their chronology by the cycle of 60 years, which he regulated by means of two series of characters; the one of 10, the other of 12 characters, called, from the first of each series, Kea Tsze. This system is in use to the present day, and will be fully explained in a subsequent page. The year of the introduction of the cycle is the starting-point of Chinese chronology; and I may observe that the present cycle is reckoned by the Chinese as the 76th, the first year of which was A.D. 1864. It therefore follows, that in 1863 the 75th cycle was completed: consequently $75 \times 60 = 4500$, the number of years then elapsed from the first year of the first cycle; and $4500 - 1863 = 2637$, the date B.C. of that year, which is said to have been the 60th year of Hwang Te. He is also considered as the inventor or discoverer of the lunar cycle of 19 years, by which the return of the conjunctions and oppositions of the sun and moon can be calculated, and the intercalary moons regulated. Hence it should appear that the lunar cycle of 19 years, introduced among the Greeks, many ages after, by Meton, was known to the Chinese more than 2000 years before that astronomer was born. These are mentioned merely as Chinese traditions, and not as resting on any other authority.

In the Chinese annals it is recorded, that in the reign of Chuen Kuh, the grandson of Hwang Te, in the spring of the year, on the first day of the first moon, a conjunction

of the five planets occurred in the heavens, in Ying Shih. Ying Shih, or, as it is more usually denominated, Shih, is one of the 28 stellar divisions, determined by α , β , and other stars in Pegasus, extending north and south from Cygnus to Piscis Australis, and east and west 17 degrees, and comprising parts of our signs Capricornus and Aquarius. The Emperor Chuen Kuh is said to have reigned 78 years, from B.C. 2513-2436, and to have died in his 97th year; and from modern computations (I believe, by Bailly the French astronomer) it has been asserted that a conjunction of the five planets actually *did* take place about the time and within the limits indicated, *i.e.* on the 29th of February, 2449 B.C., being the 65th year of Chuen Kuh. Should this, on further investigation, prove correct, it will afford a strong presumption of the authenticity of the early Chinese annals, as there is no appearance of their astronomers having been at any time able to compute the places of the planets so far back; and the account is found in works published long before any intercourse with Europeans had taken place.

The next notice of Chinese astronomy appears in the 'Shoo King,' one of their five classical works, which is considered by the Chinese as the most ancient of their books. We have it as revised by Confucius, about the sixth century before our era. It was even then considered as of extremely remote antiquity, and from the peculiarities of the style of the early portions of that work there is but little doubt of such being the fact. Not only do the Chinese themselves assert its authenticity, but many of the best European scholars believe it to be genuine. Among these, Father Gaubil expresses no doubt of that fact; and M. J. B. Biot, in his account of Chinese astronomy, informs us that M. Stanislas Julien, without doubt the most accomplished Sinologist in Europe, has expressed the same opinion, which he derives from internal evidence, founded on its peculiar archaic style and construction. On examination, it appears to be rather a collection of historical documents of different ages than a continuous history, and may be considered as being quite as much to be relied upon as any of the histories of ancient nations that have descended to us.

The first section of the 'Shoo King' is called Yaou Teen, and records the actions of the Emperor Yaou. According to the Chinese authorities, this prince ascended the throne in the 41st year of the 5th cycle of 60 years. It has just been shown, that the reckoning by cycles commences with the year B.C. 2637. Four cycles of 60 years will be 240 years, and 41 years of another cycle will make 281; consequently 2637 less 281 will give 2356 for the first year of Yaou.

In the first section of the 'Shoo King,' just mentioned, in the paragraphs 3 to 8 inclusive, the instructions of Yaou to his astronomers, under the designations of He and Ho, are given. These names, He and Ho, are possibly not those of individuals but of two families, under whose superintendence the arrangement of the calendar for the year, and the making the necessary observations and the requisite computations, were placed, and whose office, in accordance with Oriental custom, was probably hereditary. These instructions are of great interest, as being probably the earliest relating to astronomy on record; and a summary of them will, therefore, not be out of place here. It must also be observed, that these paragraphs have each a commentary of far more recent date; without which, such is the abstruseness of their style, there would be great difficulty in understanding them.

In the first of these paragraphs Yaou is described as commanding He and Ho 'to observe the heavens, to compute the calendar, to form an instrument by which the motions of the Sun, Moon, and twelve signs might be represented, and with due respect to impart information respecting the seasons to the people.'

The comment on this paragraph is worthy of attention. In it we are informed that one of the words employed (Leih) signifies the recorded observations or computations. Another (Seang) refers to an instrument, probably resembling our armillary sphere. It is also stated that the Sun represents the male, or superior principle of nature, and the Moon the female, or inferior principle; that the Sun passes round the Earth in one day, and that the Moon is every lunation in conjunction with the Sun; that the word Sing, or stars, indicates not only the 28 stellar divisions, but also the five planets, Mercury, Venus, Mars, Jupiter, and Saturn; and the commentator fancifully compares the heavens to a piece of cloth in the loom, the stars forming the warp and the planets the woof: thus not inaptly indicating the paths of the planets among the fixed stars. Another word (Shin) is explained as signifying the twelve places in which the sun and moon are in conjunction: thus, in some measure, answering to our twelve signs. This may serve to give some notion of Chinese astronomy in those early times, and also to show the general nature of the commentary.

In the second paragraph Yaou establishes a division of the duties, and orders Ho Chung (or, as he may be called, He the Second) to go to a certain place in the East. He directs him to receive the rising Sun with due respect (that is, to perform the ceremonies necessary for that purpose), and to arrange the business of the spring. He was to observe whether the days and nights were at that time of equal length. A certain star (Neaou) is mentioned as being the correct indicator of the season, and certain tests are named as showing the middle of spring. There are the people going abroad on agricultural business and the pairing of birds and beasts.

The Commentator informs us, that 'after the completion of the Calendar a division of the duties took place, in order that certain observations might be made to verify the computations, lest inadvertently some error might have been introduced. These form the subject of this and the three succeeding paragraphs.' He also observes, 'Some suppose that these particular instructions were given to the second and third brothers of He and Ho, while others are of opinion that He and Ho are official denominations, and not the names of individuals, and that the others were assistants of different grades: which opinion is correct,' says he, 'cannot now be rightly ascertained.' The duties to be performed in this verification are distinctly named, and the star 'Neaou Bird' is said to refer to a star in one of the seven stellar divisions of the southern quarter, denominated that of the 'Red Bird.' He also informs us, that 'by a Chinese astronomer named Tang Yih Hing the star Neaou is considered to be the same as the zodiacal division Shun Ho, 'the Quail-fire.' This star appears to be identical with α or Cor Hydræ, which is the central star of that division, and which is said to have culminated at sunset on the day of the vernal equinox in the time of Yaou.

Now if α Hydræ were observed culminating at sunset on the day mentioned, the Sun must have been in our sign Taurus, or in the Chinese division Maou, determined by the Pleiades; which was, consequently, then the equinoctial point. Reckoning from the

middle of that constellation (the Pleiades), we find it may be roughly estimated as being, at the present time, rather more than 58 degrees from the equinoctial point—say 58 degrees. Now the precession of the equinoxes being at the rate of about a degree in 72 years, by multiplying 72 by 58 we obtain 4176 years as having elapsed since the time of Yaou to A.D. 1870, and 4176 less 1870 will be equal to 2306 B.C. as the date of the observation. It has been before shown, that the reign of Yaou commenced in the year 2356 B.C. He is said to have reigned 100 years, and 2356 less 2306, the number just found, will give the 50th year of that reign. This may be considered sufficiently near for a rough computation like the present, and thus a strong presumptive proof is again afforded of the veracity of Chinese history as recorded in the 'Shoo King.'

In the third paragraph Yaou directs He Shuh, or He the Third, to go to a place in the South. He is there to observe, with due ceremony, the length of the Sun's shadow, and thus to ascertain the middle of summer. Another star (Ho) is mentioned as indicating that period, and the tests are, the people still more actively engaged in agriculture, the moulting of birds, and the change of the fur in animals. This evidently refers to the observation of the summer solstice by means of the shadow of the gnomon. The star Ho, or Ta Ho, is the central one of the seven stellar divisions of the western quarter, that of the 'Azure Dragon,' and is identical with β in Scorpio.

The fourth paragraph contains the instructions to Ho Chung, or Ho the Second. He is directed to proceed to the West, and respectfully to escort the departing Sun. The days and nights are again equal. The star (Heu) is mentioned as the indicator of the season, and the tests are the people resting from their labours, the birds being well fledged, and the beasts having sleek coats. The star Heu is the central one of the seven stellar divisions comprised in the northern quarter, that of the 'Black Warrior,' and is identical with β Aquarii.

In the fifth paragraph Ho Shuh, or Ho the Third, is commanded to go to the North, to observe the northern changes. The day is then at the shortest, and the stars Maou are mentioned as those by which the winter solstice may be correctly ascertained. The tests are, the people keeping themselves within-doors and the birds and beasts having their winter covering of down and hair.

The stars Maou form the central one of the seven stellar divisions of the eastern quarter, that of the 'White Tiger,' and answer to the Pleiades. I may here observe, that the stars mentioned as the indicators of the seasons are about six hours of R. A. apart from each other: thus affording another presumptive proof of the accuracy of the early Chinese astronomical observations. The stellar divisions and the four quarters mentioned will be fully explained in a subsequent part of this work.

In the sixth paragraph Yaou thus addresses his astronomers:—'He and Ho, ye know that a year has 366 days. Fix the intercalary moons, regulate the hundred offices, and all things will prosper.'

The Commentator upon this paragraph informs us, that the year of 366 days mentioned by Yaou is that of the revolution of the heavens, and that the length of the solar year is 365 $\frac{1}{4}$ days. He minutely describes the various computations needed for ascertaining the exact length of the year, with many other particulars of interest, but which can hardly be entered into here.

Such is the substance of these curious notices of early Chinese astronomy, perhaps the most ancient on record. It must, however, be borne in mind, that the correctness of this account depends entirely upon the degree of evidence to be given to the 'Shoo King.' Assuming its authenticity, of which there can be but little doubt, we find that at a very remote period, *i. e.* between two and three thousand years before the Christian era, the Chinese had made great progress in astronomy, that they were acquainted with the true length of the year, that they observed the equinoxes and solstices, that they had discovered the necessity of frequent intercalations of moons, or months, to keep the seasons in their true places, and were able to perform the computations requisite for that purpose; together with many other facts, proving the high degree of knowledge of astronomy to which they had attained.

The second section of the 'Shoo King,' called 'Shun Teen,' is devoted to the actions of the Emperor Shun, the successor of Yu. In this the following curious passage occurs:—'He examined the Tseuen Ke and the Yuh Hing, that the seven Ching might be duly regulated or observed.' The Tseuen Ke was the instrument before mentioned as resembling our armillary sphere; it is described as having been enriched with pearls, and the Yuh Hing appears to have been a kind of quadrant, having a jewelled tube fixed transversely. The seven Ching are the Sun, Moon, and five planets. There is a very full commentary upon this passage, occupying nearly four pages. The object of this examination by Shun is said to have been that he might ascertain whether the instruments were in order, so as to enable correct observations of the heavenly bodies to be made; which observations were required in the computation of the Calendar. There are some curious passages in this Commentary relating to the theories of the heavens, and many other particulars, explaining the construction and use of the before-mentioned instruments. There is also a description of one made upon the ancient principles, about A.D. 450, in which the tube is said to have been 8 cubits in length and 1 inch in diameter. In this both these instruments were combined in one, and the tube being fixed to one of the circles of the sphere, which was movable, it could be turned about, and the positions of the Sun, Moon, and other heavenly bodies, could be ascertained by looking through it.

There are many other allusions to astronomy in this very ancient book, the 'Shoo King.' The eclipse described by me in the 'Monthly Notices,' vol. xxiii. p. 238, which occurred in the year 2158 B.C., is there recorded.

In other early books of the Chinese, astronomical notices occur. In the 'Shu King,' a collection of ancient poems, selected and arranged in their present form by the celebrated Confucius, comets and the stellar divisions are alluded to. In the 'Chun Tseu,' a work written by Confucius, the eclipses of which I have given an account in the 'Monthly Notices,' vol. xxiv. p. 39, are recorded. In the 'Tso Chuen,' another ancient historical work, there are many astronomical notices; and in the 'Urh Ya,' a kind of dictionary of terms, even then considered of high antiquity, compiled during the Chow dynasty, *i. e.* between B.C. 1122 and 314, the twelve Kung, or zodiacal signs, and many of the stellar divisions, are mentioned. The great historical work, the 'Shu Ke,' which commences with Hwang Te, about 2650 B.C., and to which I am indebted for a large proportion of the observations of comets detailed in the subsequent pages of this volume,

is highly deserving of notice. This truly great work was commenced by the historian Sze Ma Tseen. He brings the history of China down to the year 97 B.C., and it has been continued by a succession of historians to the end of the Ming dynasty, A.D. 1644. In this work certain sections are devoted exclusively to astronomy; and these, of course, in the present investigation, are the most important. In these, among other interesting matters, are to be found observations of the Sun, Moon, and five planets; occultations of stars; and notices of extraordinary appearances in the heavens, among which comets hold an important place.

Astronomical notices also occur in many other historical and scientific works, among which the accounts of comets in the celebrated 'Encyclopædia' of Ma Twan Lin must be particularly mentioned. It is only recently I have obtained a sight of this important work, for which I am indebted to the Rev. J. Summers, Professor of Chinese in King's College, London, who has kindly favoured me with the loan of the volume containing the cometary observations; and has thus enabled me to render my list far more complete, both as to details and number, than it otherwise would have been. Ma Twan Lin flourished during the later Sung dynasty, A.D. 960-1279. His laborious compilation of the Encyclopædia bearing his name is looked upon by the Chinese as one of the most extraordinary works ever produced by man. It is much admired by them for the immense amount of information it contains, and for the elegance and perspicuity of its style. The volume I have just referred to contains notices of comets from B.C. 613 to A.D. 1222, shortly after which date the author appears to have died. A Supplement, bringing the work down to A.D. 1644, has since been published, containing the cometary observations from the death of Ma Twan Lin to that date. Of this I had previously seen a copy, and made the necessary extracts.

The 'Tung Keen Kang Muh,' an abridgment of Chinese history from the earliest times to the end of the Yuen dynasty, A.D. 1367, in 100 volumes, is another work containing brief accounts of comets, some of which are not found in the 'She Ke.' It has been translated into French by M. Mailla.

Various works, professedly on astronomy, also occur, from one of which the Chinese Celestial Atlas, hereafter to be noticed, has been copied. In one of these works, printed in 1652, there is a list of 155 of the most important treatises on astronomy then existing in China. These afford another proof of the great attention paid by the Chinese to that science. It must, however, be observed, that astrology is almost universally coupled with astronomy by that people.

Such is a very brief summary of the state of astronomy among the Chinese. As we proceed, other portions of the subject will be touched upon and explained. It is chiefly from the works just mentioned, and more particularly from the 'She Ke' and the 'Encyclopædia' of Ma Twan Lin, that the observations of comets, that form the subject of the present compilation, have been derived; and it may be observed, that the materials thus collected consist of observations of comets made under the various dynasties from the period of the Chun Tsew, B.C. 613 to A.D. 1640: shortly after which time the Ming dynasty was subverted by the present reigning one, the Tsing.

They commence with B.C. 613, that being the year in which the cometary observations of Ma Twan Lin begin. The observations of comets earlier than this are

not only very few, but are also so vague and unsatisfactory in their details, that it was thought advisable to omit them altogether.

The number of observations of comets thus brought together amounts to 373. Some of these may possibly be meteors, and may consequently be rejected on future revision. M. E. Biot, in the Supplement to the '*Connaissance des Temps*' for 1846, has published a catalogue of comets observed in China under the following heads:—

Those from A.D. 1230 to 1649, of which he notices	94
Those from B.C. 134 to A.D. 1203	54
Those near oppositions of Halley's Comet	66
Making a total of	214

It appears, therefore, that the list of cometary observations in the present work contains 149 more than Biot's catalogue.

The translation is as literal as the idiom of the two languages would allow, and every care has been taken to make it as accurate as possible. It must, however, be observed, that no attempt has been made to translate the names of the Chinese asterisms, as no useful purpose would be answered by it; and to give the meaning of a few and not of the whole would tend to introduce confusion in the narrative. The original names have, therefore, been everywhere retained. It may also be remarked that the Chinese names are quite as fanciful as our own. Thus, Canopus is called *Lao Jin*, 'the Old Man'; Arcturus, *Ta Koo*, 'the Great Horn'; the seven bright stars in Ursa Major, *Pih Tow*, 'the Northern Measure'; and the stellar division in which our constellation Gemini occurs is called *Tsing*, 'the Well.' These and other Chinese words will be found in the English version of the text untranslated: they are, however, in every instance, fully explained beneath the text. They have been so placed, not only for the convenience of classification, but also as enabling explanatory remarks to be introduced where necessary.

The manner in which these observations are recorded in the original is more or less explicit. In some we have merely the dynasty, emperor, year, and moon, or others, the day and place of the heavens in which the comet was seen are added; and in those which are the most fully described we have, in addition to the particulars before mentioned, the path of the comet through the heavens: comprising the stellar division in which it was seen, the asterisms through which it passed, and the stars near to which it approached; together with the various days on which it was observed and the length of time it was visible, its colour, the length and direction of the tail, and other circumstances considered worthy of notice.

The description may, therefore, be considered as divided into two general heads: the one chronological, the other astronomical. In the chronological part we have to ascertain all particulars respecting the dates of the dynasty, the emperor, the epoch and its year, the moon or month, and the day on which the comet appeared, and the days subsequently mentioned until its final disappearance. In the astronomical part we have, in like manner, to ascertain the stellar division in which the comet was first seen,

and those through which it subsequently passed; and the various asterisms and stars mentioned as being in its path. To these must be added the description of the appearance of the comet, as regards colour, length of tail, &c.

For the first of these objects, viz. the ascertaining the various dates mentioned, it has been found necessary to construct several Tables. The first portion of these consists of a complete set of Chronological Tables, in which are to be found the succession of the Emperors from the earliest times, the dates of their accession to the throne, and the duration of their epochs and reigns, reduced to our reckoning. These Tables comprise the whole of the dynasties considered as regular by the Chinese, in their succession from the most remote period to the present time, with the names of the Emperors and of the epochs adopted by them. These are arranged in columns. The names of the Emperors and epochs are given in the original characters, with the pronunciation in English; together with the date of the commencement and duration of each epoch and reign. To these are added Tables of the Minor Dynasties, with the names of their princes and epochs as far as could be ascertained. The whole from original sources.

In forming these Tables, valuable assistance has been obtained from a chronological work compiled by the Japanese Prince of Mito, and published in Japan about 1863; in which not only is the chronology both of Japan and China given from the earliest times to A.D. 1860, but also the corresponding dates B.C. and A.D., according to our mode of expressing them. This work affords much valuable information, and deserves great praise for the perspicuity of its arrangement and the able manner in which it has been carried out. I need scarcely say the work is in Japanese; but the characters being the same as the Chinese, and as, although differing phonetically, they have precisely the same meaning, there was, therefore, no difficulty in making them out. The title in Chinese reads, 'Sin Chuen Neen Peaou,—A newly compiled Guide to Years,' or Chronology.

The word Epoch having been frequently used, it may be necessary to explain what is meant by that term. In this and the succeeding pages, the word Epoch is employed to designate the appellation of the years of the Emperor's reign. The term is not strictly correct, the Chinese equivalent being 'Neen Hao, —The Years' Name,' or designation; but it is the nearest I could adopt. It is now about 2000 years since it has been the custom of the Chinese Emperors to assume certain adulatory titles to express the years of their reign; and it is by those titles these personages are designated by the people at large and by strangers. The true name of the Emperor is never mentioned, as it would be considered as highly insulting to him to do so. Upon his death another name is given him, by which he is hereafter to be known in history. This is called his Temple name, being that placed in the Temple of Ancestors. It follows, therefore, that Kang Ho, Keen Lung, Taou Kwang, are not the names of the Emperors thus usually designated, but only the appellations of the years of their respective reigns; and in history they are only known as Shin Tsou, Kaou Tsung, and Tseuen Tsung. It was formerly customary to change the epoch several times during a reign, and we have one instance in the early part of the Han dynasty of 11 such changes in a reign of 54 years; and under the Tang dynasty there are no fewer than 14 changes in a reign of 34 years. From the accession of the Ming dynasty, A.D. 1368, to the present, excepting in one instance, no change has been made in the epoch during the reigns of any of the

Emperors, that assumed at the accession having been kept until the close of the reign. These circumstances render the study of Chinese history a matter of some difficulty at the first, and hence the value of accurate tables in any investigations involving dates.

In using these Tables, the dynasty having been ascertained, the names of the Emperors of that dynasty and of their epochs, with their dates, will be found in their respective columns. For example: Required the 3rd year of the Epoch Woo Fung, of the Emperor Seuen Te, of the Western Han dynasty. On reference it will be found that Seuen Te was the eighth emperor of that dynasty; that he reigned 25 years, from B.C. 73-49; that Woo Fung was his 5th epoch, extending from B.C. 57-54: consequently its 3rd year was B.C. 55. Again, Tang dynasty: Required the 2nd year of the Epoch Han Hang, of the Emperor Kaou Tsung. On reference it will be found that Kaou Tsung was the third emperor of that dynasty, who reigned 34 years, from A.D. 650-683, and that Han Hang was his 7th epoch, from A.D. 670-673. The 2nd year of the Epoch Han Hang was, therefore, 671. It will be seen from these examples, that these Tables give all the information required for ascertaining the date of any year, according to our reckoning, that may occur in Chinese history.

Having thus ascertained the year, we have next to find the moon, or month, and the day of the year, on which a comet appeared, or any other remarkable circumstance occurred. For understanding the method of computing these, some acquaintance with the Chinese Calendar is required.

The Chinese year is luni-solar, and is reckoned by lunations, or moons as they term them; which may be considered as answering to our months, and of which 12 make up the ordinary year. These moons are of 29 or 30 days, regulated by certain fixed rules. They, however, are not alternate, and the common year consists of but 354 or 355 days. Hence the necessity of frequent intercalary moons at short intervals, there being seven of these moons in the cycle of 19 years, and consequently they fall generally between every second and third year. The year thus increased consists of 384 or 385 days; and in this manner the deficiencies of former years are made up, and the seasons kept in their proper places. This mode of intercalation appears to have been practised from extremely remote antiquity, as it is mentioned, as I have before shown, in the instructions of Yaou to his astronomers, more than 2000 years before the Christian era.

The succession of the moons in any one year is regulated by the first day of that year, which is not a fixed day, as with us, but, like our Easter Sunday, is not the same for two consecutive years. The first day of the Chinese year is the first day of the lunation in which the Sun enters our sign Pisces: it may, therefore, be any day between January 22 and February 20 inclusive. Hence it follows that this first day of the year must, of necessity, be ascertained before the moons can be properly appropriated. For this purpose the lunar cycle of 19 years must be employed; and a Table of the first year of each of these cycles, from B.C. 609 to A.D. 1995, has been constructed: as also another Table, showing the first day of each lunation in every year of the 19-year cycle. These Tables are formed from those in '*L'Art de Vérifier les Dates.*' In order to use them, we must find in the first of these Tables the number of the given year in the 19-year cycle in which it occurs, and against that number in the second Table will be found approximately the first day of each lunation in that year. For example: Let it be

required to find the 1st day of the 6th moon in the year A.D. 678. In the Table of the first years of cycles, 684 is the nearest below that number, consequently 698 is the 15th year of that cycle; and in the second Table it will be found that the 1st day of the 1st moon in the 15th year of the cycle is February 17, and the 1st day of the 6th moon July 15, the day required. Again: Required the 1st day of the 10th moon, A.D. 1448. Here 1444 is the 1st year of the cycle in which 1448 occurs, of which it is the 5th year, the 1st moon of which commences February 7; and the 1st day of the 10th moon is September 2. It must, however, be observed, that these Tables must be considered as approximate only: they are, however, sufficiently accurate for the purpose required. It must also be remarked, that the earliest date on which the first day of the Chinese year can fall is January 22; and whenever the second lunation in the Table commences in February, after the 20th, the lunation commencing in January is to be taken as the first of that year, and the succeeding moons reckoned accordingly. Thus, in the 14th year of the cycle of 19 years the lunations commence with January 30, February 28, &c.: in this case January 30 is the first day of the Chinese year. In the 11th year the moons are January 3, February 2, &c. Here the first day is February 2.

The mode of reducing Chinese days to our reckoning is the next point to be considered. In order to comprehend this it is necessary, first, to explain the principles of the system by which the Chinese arrange their chronology. They reckon by means of periods, or cycles, of 60 years; the years in these cycles being regulated by means of the combinations of two series of characters, the one of 10 the other of 12.

The following Table shows these characters in the order in which they occur:—

FIRST SERIES, 10.

甲	Koa
乙	Yih
丙	Ping
丁	Ting
戊	Woo
己	Ke
庚	Kang
辛	Sin
壬	Jin
癸	Kwei

SECOND SERIES, 12.

子	Tsze
丑	Chow
寅	Yin
卯	Maou
辰	Shin
巳	Sze
午	Woo
未	We
申	Shin
酉	Yew
戌	Seuh
亥	Hae

This system is called *Kea Tsze*, from the names of the first characters in each series. It is said to have been first introduced by the Emperor *Hwang Te*, the first year of the first cycle being reckoned as the 61st of that emperor's reign, answering to B.C. 2637. Whether this statement be correct or not this is certain, the system has been in use from extremely remote antiquity, and is employed in all their historical works, however early, to express the various dates that occur in them.*

They are employed thus:—The characters in the first series are combined with those in the second, from the first to the tenth, in this manner,—*Kea Tsze*, *Yih Chow*, &c. to *Kwei Yew*. The first character in the first series is now combined with the eleventh of the second, *Kea Seuh*; and the second of the first with the twelfth of the second, *Yih Hae*; and the other combinations follow in due order. Proceeding thus, after sixty combinations, the last being *Kwei Hae*, the first characters in both series come together again, and a fresh cycle commences, the combinations of the characters following in the same order as before. This system is employed not only to express the years of the cycle, but also months, days, and hours. It is also applied to the points of the compass, and any other expression of numbers in a series of ten or twelve.

The Chinese days of the year are not reckoned, as among us, by weeks of seven days, each day having a definite name, but by cycles of 60 days, the characters of which are the same as those of the cycle of 60 years. The names of the days also are the same as those of the combinations of the *Kea Tsze*.

The ordinary year consists of six of these cycles of 60 days, making 360 days; consequently they fall short of the true number of days in the year—in common years by 5 and in leap years by 6 days. Hence there is a continual shifting of the characters for any particular day. If, however, the characters for a certain day in any one of our years—say January 1, 1860—are known, the characters for any other day in that year are easily ascertained. The characters for the 1st of January in any year are to be found by means of a Table, whose construction I will now explain. I have just remarked, that the reckoning of the days of the year by periods of 60 days, according to the Chinese method, falls short of the true year by 5 days in common and by 6 days in leap years. Hence it follows, that in the cycles of 60 days the characters for the 1st of January in any year being known, those for the same day in the succeeding year will be five in advance; unless it should be leap year, when they will be six in advance. Let us assume the characters for the 1st of January, 1860, to be those of the first of the cycle, *Kea Tsze*; those for 1861 will be *Ke Sze*, the sixth combination; those for the same day in 1862 will be *Kea Seuh*, the eleventh combination; those for 1863, *Ke Maou*, the sixteenth; and those for 1864, a leap year, *Yih Yew*, the twenty-second: the first three being five in advance and the last six. Proceeding thus, taking every fifth combination for common years and every sixth for leap years, we shall find, after eighty combinations, on the eighty-first the first combination, *Kea Tsze*, will recur, followed by the succeeding ones in precisely the same order as before; and thus a

* The whole of the Tables referred to in this and the succeeding pages will be found in the Appendix.

general Table will be formed, showing the characters for the 1st of January for 80 years. In the Table the combinations are numbered from 1 to 80, for the convenience of reckoning. It must also be observed, that the Julian reckoning is that to be employed in reducing Chinese time.

In order to find by this Table the characters for the 1st of January in any given year, a second or auxiliary Table is required. In this the year of the commencement of each period of 80 years, from B.C. 2561-1920, is given. They are arranged under the letters B.C. and A.D. For years A.D. subtract from the given year the next lower number in this second Table, and against the number thus ascertained the characters for the 1st of January in that year will be found. A few examples will render this clear:—

Required the characters for January 1, A.D. 943.

943 — 880 (the next lower number in the second Table) = 63. Against No. 63 in the 80-year Table are Jin Yin, the characters required.

Required the characters for January 1, A.D. 1396.

1396 — 1360 (the next lower number) = 36; against which are Kang Shin, the characters required.

Required the characters for January 1, A.D. 1868.

1868 — 1840 = 28; against which are Woo Seuh, those required.

To exemplify the correctness of these results, I may observe that Gaubil informs us that the characters for January 1, A.D. 1267, were Kwei Hae.

1267 — 1200 = 67; against which are Kwei Hae.

And again, that those for January 1, A.D. 638, were Sin Yew.

638 — 560 = 78; against which are Sin Yew.

For years B.C. the process differs slightly. Here we have to subtract the given year from the next higher number, and proceed as before.

Required the characters for January 1, B.C. 643.

721 (the next higher number) — 643 = 78; against which are Sin Yew, the characters required.

Required the characters for January 1, B.C. 279.

321 — 279 = 42; against which are Jin Sze, those required.

To exemplify this, Idler informs us that the characters for January 1, B.C. 198, were Ting Sze.

241 — 198 = 43; against which are Ting Sze.

Such is the extremely simple method to be pursued to find the characters for our 1st of January in any given year, B.C. or A.D. To find the days mentioned in the account of any occurrence or phenomenon, such as the appearance of a comet, &c., we must return to the Table of 60 days.

It has already been shown, that the first combination in that Table recurs on the 61st, and commences a new cycle, either of years or days, as the case may be. Hence it is evident, that the characters for January 1 in any year must recur on the first day of

each subsequent period of 60 days, and, therefore, that in common years the characters for March 2, May 1, June 30, August 29, October 28, and December 27, being the first days of each period, must be the same as those for January 1. In leap years they occur on March 1, April 30, June 29, August 28, October 27, and December 26. It follows then, that the characters for January 1 in any year being known, those for any other day in the same year can be easily ascertained. For this we must proceed in the following manner. — Having by the methods before mentioned found the month according to our reckoning, answering to the Chinese moon in which the given day occurs, we must then ascertain within which of the dates just mentioned as those of the recurrence of the characters for January 1 it is to be found. Let us suppose the day required to be one in the moon answering to our month of July. It will then fall between June 30 and August 29. In this case June 30 assumes the characters for January 1, and now, by counting on from that combination in the Table of 60 days, commencing with its date June 30, until we arrive at the characters of the day required, we obtain the date of that day. For example —

Required the day *Sin Ohow*, in the 7th moon, A.D. 365. We have first to find January 1, thus, $365 - 320 = 45$, against which we shall find in the 80 year Table *Woo Shin* (5), the characters for January 1. 365 is the 5th year of the lunar cycle, in which year the 7th moon commences August 1. The 60 day cycle, in which this date occurs, commences June 30, which is consequently *Woo Shin* (5). Tally this June 30, and count on to *Sin Ohow* (38) in the 60 day Table, and the date will answer to August 2, which is that required. The small figures in brackets refer to those after the Chinese combinations of characters in the 80 year Table, and are their numbers in the 60 day Table. Thus, *Woo Shin* is the 5th and *Sin Ohow* the 38th in that Table. These numbers greatly facilitate the finding the required characters in the 60 year Table.

The following example will, I trust, fully exemplify the nature of the computations requisite in reducing Chinese time to European reckoning. It is a copy of one of the observations of comets recorded in the subsequent part of this volume.

It is stated that during the Sung dynasty, in the reign of the Emperor *Lo Tsung*, in the 5th year of the epoch *King Ting*, the 7th moon, on the day *Koa Seuh*, a comet appeared. It was also observed on the days *Ke Maou*, *Sin Hzo*, *Woo Wou*, *Koa Tszo*, and *Sin Wei*, when it disappeared.

On reference to the Chronological Tables it will be found, that the Sung dynasty ruled China from A.D. 960–1279. *Lo Tsung* was the fourteenth emperor of that dynasty, and reigned from 1225–1264. *King Ting* was his eighth epoch, 1260–1264, the fifth year of which was 1264, the year required. To find the characters for January 1 in that year $1264 - 1200 = 64$, against which, in the 80 year Table, will be found *Ting Wei* (40), which are, consequently, the characters for January 1. 1264 is the 11th year of a cycle of 19 years. The 7th moon in that year of the cycle commences towards the end of July, in which case the nearest preceding date on which the characters for January 1 occur is June 29, 1264 being a leap year. Now count on from *Ting Wei* (40), June 29, to *Koa Seuh* (11), which will be found to be July 31, thence to *Sin Hzo* (38), August 2, thence to *Ke Maou* (10), September 8, to *Koa Tszo* (1), September 14, and to *Sin Wei* (3), September 21, on which day the comet disappeared.

Having thus explained the mode of reducing the various dates occurring in these observations to European reckoning, I pass on to the second, or Astronomical division of the subject, in which we have to consider the manner in which the place of the comet and its course among the stars are to be ascertained. For understanding this, it will be necessary to give a brief summary of some of the principles of Chinese astronomy.

The Chinese divide the visible heavens into 31 portions, 28 of these may be termed the stellar divisions, and receive their names from, or are determined by, an asterism, generally forming the central or principal one of the division. The determination by an asterism having the same name has been preferred by me to that by any particular star in that asterism, as being, to the best of my judgment, more in accordance with the Chinese mode of proceeding, in which, as far as my experience goes, the asterism alone is mentioned, and not a determining star in that asterism. Various other asterisms make up the remainder of the divisions. These divisions are very irregular in their extent, both from north to south and from east to west, no two being alike in these particulars, the largest extending north and south from Perseus to Argo, and east and west $32^{\circ} 49'$, while the smallest consists only of the few small stars in the head of Orion and of some other small stars in the immediate neighbourhood, extending from east to west but $24'$.

In the Appendix will be found a Table of the 28 stellar divisions, their determining asterisms, and their extent north and south, and east and west.

In addition to these divisions there are three large spaces, denominated *Yuen*, a word signifying a wall, or enclosure. These are, *Tsü Wei Yuen*, which may be considered as comprising stars within the circle of perpetual apparition, *Tien Shu Yuen*, consisting of stars contained within a line drawn through the constellation Serpens and continued to the circle of perpetual apparition, thus comprising the upper part of Ophiuchus, Hercules, Corona Borealis, and some stars in Bootes, Aquila, and Taurus Poniatowski. The third space is called *Tao Wei Yuen*—this is contained within a line drawn through β , γ , δ , ϵ and others in Virgo, and β , σ , ι , θ and δ Leonis, and continued, as in the preceding instance, to the circle of perpetual apparition, thus comprising stars in Virgo and Leo, Corona Borealis, and others in Canes Venatici, Ursa Major, and Leo Minor. It must, however, be observed, that in the cometary observations the 28 stellar divisions are frequently alluded to as extending to the Pole, without reference to these three spaces. Thus, in several instances, the comet is described as having passed through 12 or even 15 of these stellar divisions before it disappeared, all its early places having been within the circle of perpetual apparition, where such a circumstance might easily happen, on the assumption that the stellar divisions were continued to the Pole, without its course being in any way extraordinary, on account of its high northern latitude.

As these divisions are continually referred to in the astronomical observations of the Chinese, an acquaintance with them is essential in investigations such as form the object of this work. Drawings have, therefore, been made from original charts in a Chinese treatise on astronomy, so as to form a complete Celestial Atlas, fully elucidating their method of representing the heavens. This Atlas comprises the greater number of the

asterisms referred to in these observations. A few names, however, occur in them that are not to be found in any of the charts or lists I have hitherto met with, and are, consequently, mentioned as unascertained. The Atlas consists of maps of the 28 stellar divisions just referred to, with the names of the asterisms as they occur in the original map, and their pronunciation in English, with an account of the stars composing them according to our nomenclature. This Atlas will be found in the Appendix to this work.

In compiling the explanatory part relating to this Atlas, great assistance has been derived from a tract entitled '*Chinese Names of Stars and Constellations*,' which forms an appendix to Morrison's Chinese Dictionary, and which was contributed to that work by the late John Reeves, Esq., formerly a Fellow of the Royal Astronomical Society. Another Catalogue, by Father Franciscus Noel, contained in his '*Observationes Mathematicæ et Physicæ in India et China factæ*' (4to Prague, 1710), has also been found of great service, as corroborating Reeves or throwing light on doubtful cases. Nothing, however, has been taken for granted, the stars depicted in these maps having been carefully verified by reference to, and comparison with, other star charts, both European and Chinese. To these is added an Index, by which, the name of the asterism being known, the chart in which it occurs can be readily found, and in order to render this Atlas still more intelligible, reduced drawings of the figures in Flamsteed's Atlas have been made, and the principal Chinese asterisms laid down upon the corresponding stars in them.

The Chinese arrange these 28 stellar divisions under four general heads, answering to our east, west, north, and south. These divisions are of very remote antiquity, and have received the names of Tsing Lung, 'the Azure Dragon,' Heung Woo, 'the Black Warrior,' Ohoo Nonou, 'the Red Bird,' and Pih Hoo, 'the White Tiger.' Each of these comprises three of the divisions called Kung, answering to, although not identical with, our zodiacal signs. The nature of these Kung will shortly be explained. Under the first of the four above-mentioned divisions, the Azure Dragon, considered by the Chinese as the autumnal quarter, we have three of the Kung, answering to our signs, Libra, Scorpio, and Sagittarius, and seven of the stellar divisions, those from Kio to Ko (see Table of the 28 Stellar Divisions), comprising stars from Virgo to Sagittarius. Under the second of these, the Black Warrior, we have three Kung, answering to Capricornus, Aquarius, and Pisces, and seven stellar divisions, those from Tow to Pih, extending from stars in Sagittarius to others in Pegasus and Pisces. Under the White Tiger we have three Kung, answering to Aries, Taurus, and Gemini, and seven stellar divisions, from Kwei to Tsun, i. e. from stars in Andromeda and Pisces to those in Orion. Under the Red Bird three Kung, answering to Cancer, Leo, and Virgo, and seven stellar divisions, being those from Tang to Chin, viz. from stars in Gemini to Corvus.

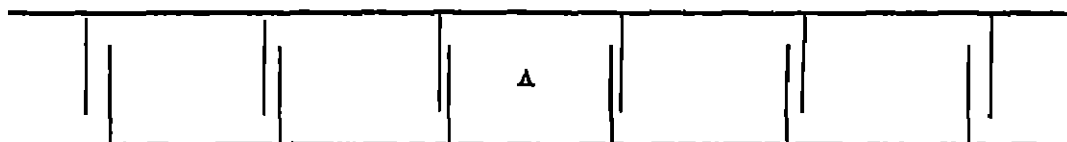
The Chinese divide their year into 24 portions, of 15 days each, thus making up the number of 360 days. These 24 portions are termed Tso Ko, the particulars relating to which will be found in a Table in the Appendix.

Of these 24 divisions, twelve, called Kung Ko, or Kung only, require more particular notice, inasmuch as they mark the twelve places in which the Sun and Moon come into conjunction, and are thus, in some degree, analogous to our twelve signs of the Zodiac.

They are distinguished in the Table by an asterisk. But it must not be supposed that the ancient names of these are in any way identical with our names of the signs, neither must they be confounded with the appellations introduced by the Jesuit Missionaries when they reformed the astronomy of the Chinese. They then adopted a set of names closely agreeing with our nomenclature, such as the White Ram for *Aries*, the Golden Bull for *Taurus*, and so on. It has been supposed by some, that as these names, agreeing so closely with those employed by us, are in use among the Chinese, they afford a convincing proof of the immense antiquity of our designations of the zodiacal signs. But no traces of these recent names are to be found in Chinese astronomy as it existed before the accession of the present dynasty, and, consequently, all inferences as to their antiquity, deduced from the correspondence of the Chinese names of the zodiacal signs and those employed in European astronomy, are wholly untenable, as no such affinity between the two sets of names actually exists.

In the Appendix is a Table, showing the names of the ancient Chinese *Kung Ke*, placed side by side with the modern names, commencing with our sign *Aries*. These ancient names are extracted from the *Astronomy of the Ming Dynasty*, published at the commencement of the present dynasty, where they mark the divisions of a catalogue of stars, and the total want of correspondence between these and the names introduced by the Jesuit Missionaries is clearly demonstrated by this Table. These last names are taken from a modern Chinese work on astronomy published in 1819, in which the two sets of names occur side by side, and are thus distinguished: the ancient denominations are termed '*Chang Kwo Ming*,' Middle Nation, or Chinese names, and the modern ones, '*Huo Kwo Ming*,' Western Nation, or European names.

The 12 *Kung* are not only used by the Chinese in regulating the equinoxes, solstices, and lunations, but they are also employed in the computation of their Calendar, to ascertain the intercalary moon. It has already been stated, that these *Kung Ke* mark the places of the conjunctions of the Sun and Moon, and, consequently, those of the new moons, or lunations. Now as each *Kung Ke* indicates a period of 30 days, and a lunation is of but 29 days and a fraction, it follows that, sooner or later, two new moons must occur in one of these *Kung*, or periods of 30 days. Whenever this happens, that moon is an intercalary moon. In order to illustrate this, let us consider the upper line in the following diagram as representing a series of *Kung* periods of 30 days, and the lower one a series of new moons of 29 days and a fraction.



From this it is evident that after a time a lunation occurs as at *A*, that falls entirely within a *Kung* period which, consequently, has two new moons in it. This is the intercalary moon, and hence the Chinese rule, '*The intercalary moon is without a Kung*.' Of these intercalary moons there are seven in the lunar cycle of 19 years.

The intercalary moon immediately follows the moon from which it receives its

designation. Thus, on reference to a Chinese Almanac for the 7th year of Hien Fung, 1857, I find the intercalary 5th moon immediately following the regular 5th moon of the Calendar of that year.

The character 門, Jun, by which the Chinese designate the intercalary moon, affords a striking instance of the figurative nature of many of the Chinese characters. It is a compound one, formed of 門, Mun, a gate, or entrance, and 王, Wang, an emperor. In each of the seasons it is the duty of the Emperor to officiate monthly in certain religious ceremonies, in halls provided for that purpose, which are arranged in a square, the sides facing the cardinal points. They call the building in which these halls are contained 'Ming Tang.' These ceremonies are fully particularised in the 'Lo Ko,' the Book of Ceremonies, or Rites, and are to be found in that work in the sixth book, called 'Yue Lung.' From this we learn that the Emperor, in the spring, performs the rites proper for that season in that part of the building facing the east, that his diets and other appointments are of a certain colour (green), with many other particulars not necessary to be mentioned here. In the summer season the ceremonies are performed in the halls facing the south, the diets, &c. being of another colour, and so on for the remaining seasons. But there is no hall provided for the ceremonies required in the intercalary moon, they are consequently performed in the gateway, or entrance to the building and hence the character Jun, representing the Emperor in the gateway, as that for the intercalary moon, is a very appropriate and significant symbol of his peculiarity in the performance of the rites for that moon. The institution of these ceremonies dates from extremely remote antiquity, and I may add that there is every appearance of their being still in use, for as late as 1787 the Emperor Kien Lung was, by a decree of the Tribunal of Rites and Ceremonies, allowed to perform these rites by deputy, his great age and consequent infirmities rendering it impossible for him to support the fatigue of going through them in person.

The 28 stellar divisions are evidently of very great antiquity, as the names of many of them occur in their most ancient works. They are to be found, together with the principal asterisms and stars composing them, in the Astronomical section of the Early Han Dynasty, in the 'Sho Ko,' which was first published in the first century of our era. This section also contains rules for forming the Calendar and computing the ordinary and intercalary moons, together with observations of the Sun, Moon, and Planets, and of extraordinary appearances in the heavens, among which those of comets occupy a prominent position.

In the Astronomical section of the Annals of the Tung Dynasty, A.D. 618-906, is an enumeration of the 28 stellar divisions, and the asterisms composing them, with notices of Eclipses and of the 12 Kung, and also observations of the Sun, Moon, Planets, Comets, &c.

The Astronomy of the Ming Dynasty, A.D. 1368-1644, is, as might be expected, much more expanded, embracing not only the whole of the before mentioned particulars, but also comprising Tables of the Sun, Moon, and Planets, together with a Catalogue of Stars, with their latitudes and longitudes, both on the equator and the ecliptic. We are probably indebted to the Jesuit Missionaries for the greater part of this addi-

tional matter, as the Tables in particular bear evident marks of being from European sources

A brief summary of the subjects treated upon in the 'Tsen Wan,' or Astronomical section of the history of the Ming dynasty, and contained, according to my copy, in the 7th vol. of the History of that dynasty, will serve to give a more definite idea of the general nature of Chinese astronomy. It is divided into three chapters, the first of which has nine subdivisions, or sections. The first of these sections treats of the T'ien Kung, that is, of the two great divisions of the universe, Heaven and Earth. In the second are notices of the T'ien, or seven Ching, which are enumerated as the Sun, Moon, and five Planets. The third section, Hsing Kung, 'Perpetual Stars,' relates to the fixed stars. In this section is the Catalogue of Stars before referred to, consisting of 109 stars, with their degrees reckoned upon the equator and the ecliptic. In the fifth section the places of 16 of the stellar divisions, in degrees of the 12 Kung, or zodiacal signs, are enumerated in like manner. The sixth section relates apparently to the application of instruments to the observation of the heavenly bodies, with their mode of construction. The T'ien Kuo, or armillary sphere, and Yuh Hsing, the Jewelled Tube, being particularly referred to. The seventh section is devoted to observations of the length of the shadow of the gnomon in various places, and in different seasons. The eighth relates to the method of reckoning the longitude, and the ninth to Chung Kung, 'Middle Stars,' by which term they appear to designate certain stars seen on the meridian at different seasons of the year.

The second chapter consists of four sections. The first of these is devoted to observations of Occultations of Planets by the Moon, and the following examples, showing their general style, may be of some interest. They commence thus —

In the 1st year of the epoch Hung Woo, the 5th moon, on the day Kou Shun, Saturn was occulted (by the Moon) that is, on May 31, 1368

In the 12th year of the same epoch, 3rd moon, day Woo Shun, Mercury was occulted that is, March 13, 1380

The second section relates to Occultations of Planets by each other. The observations run thus —

Hung Woo, 6th year, 3rd moon, day Woo Shun, Mars occulted Saturn that is, 1373, April 19

In the 6th moon of the same year, day Jin Shun, Venus occulted Jupiter that is, 1373, June 22

The third section is entitled 'The Five Planets in one place,' by which conjunctions of several of the planets are evidently meant. The following are examples —

Hung Woo, 14th year, 6th moon, day Kwei Wei, Mercury, Mars, and Venus were together in the stellar division Tsing that is, 1381, May 22. These planets were in conjunction in Gemini.

In the 17th year, 6th moon, day Ping Souh, Jupiter, Saturn, and Venus were together in the stellar division Tsan that is, 1384, July 8. The stellar division Tsan is determined by the bright stars in Orion. The conjunction was most likely in Taurus or Gemini.

The fourth section treats of Stars Occulted by the Planets. The observations run thus —

Hung Woo, 7th year, 8th moon, day Yih Sro, Jupiter occulted the great star in Hoon Yuen (Regulus) that is, on August 18, 1374

The observations in this section are exceedingly numerous, they occupy about 70 pages but it is evident they are merely eye observations, nothing like instrumental accuracy having been attempted, and they are also to the nearest day only. Whether they are ever likely to be of any value to modern astronomers must be left to others to determine. They are exceedingly simple, and could be translated without the least difficulty. I may also observe that the word (Fan) which I have rendered 'occulted,' signifies 'to screen,' 'to shade,' 'to put under shelter,' obviously implying our term, 'to occult.'

The next chapter contains nine sections. The first of these consists chiefly of stars seen in the daytime, being principally Venus, Jupiter, and Mars.

The next two sections are of much greater importance. They contain observations of what they term Kih Sing, or 'Temporary Stars,' many of which are undoubtedly comets, and of Suy Sing, 'Broom Stars,' or comets. It is from these two sections most of the observations of comets recorded in the following pages as having been seen during this dynasty have been taken.

The next section records 'Changes in the Heavens,' and the succeeding one, 'Changes in the Sun and Moon,' of which the following may be given as examples —

Hung Woo, 2nd year, 12th moon, day Koa Tso, a black spot was seen in the middle of the Sun that is, January 1, 1370

The same was observed in the 3d year, 9th moon, day Woo Souh, 10th moon, day Tung Sro, and 11th moon, day Koa Shun that is, 1370, Oct 2, Oct 21, and Nov 7

The sixth section contains accounts of Haloes round the Sun and Moon, the seventh, Changes in the Stars, the eighth, Observations of Falling Stars, and the ninth, accounts of extraordinary Clouds and Vapours.

The volumes which immediately follow the seventh contain, under another title, chiefly what we should perhaps call Meteorological Notices, and those from the ninth to the twelfth inclusive are devoted to a collection of Tables of the Sun, Moon, and Planets, evidently from European sources.

I have already mentioned that I have preferred determining the stellar divisions by the asterisms which supply their names, instead of a particular star, as being more in accordance with the principles of the ancient astronomy of the Chinese. I may also observe, that in every instance, in the following Observations of Comets, where the stellar division is mentioned, the determining asterism alone is given. But as the rejection of particular determining stars takes away the points from which the computers of cometary orbits must start, it becomes desirable that the first degrees of each stellar division, as given in original Chinese Charts, or Lists of Stars, should be ascertained as nearly as possible. Many of these have been carefully examined and collated, but I must express my regret that I have not hitherto met with any chart published before the introduction of the modern system, all I have seen being comparatively of modern date, and commencing their degrees at the vernal equinox. whereas it appears to me

most likely that the early Chinese astronomers, when their system of astronomy was first established, by placing the stellar division Koo (determined by α , &c. *Virginis*) first, in all probability commenced their reckoning with the autumnal divisions.

In order to supply the needful information as to the commencing degrees of the stellar divisions, I have been induced to form the following Table, which I trust will be found of service for that purpose.

No	Name	Degrees according to Chart	Degrees according to Compass	Determining Asterism	Determining Star according to Chart	First Degree of each S. D. according to Chart
1	Koo	11	11	α <i>Virginis</i> and another	α <i>Virginis</i>	203
2	Kang	11	11	ϵ , ι , λ , θ <i>Virginis</i>	ϵ <i>Virginis</i>	213
3	To	18	18	α , β , γ , ν <i>Libris</i>	β <i>Libris</i>	224
4	Fang	5	5	β , δ , π , ρ in <i>Scorpio</i>	π in <i>Scorpio</i>	242
5	Sin	7	8	α , σ , τ in <i>Scorpio</i>	σ in <i>Scorpio</i>	247
6	Wei	16	15	ϵ , μ , ν , &c. in <i>Scorpio</i>	μ in <i>Scorpio</i>	254
7	Ko	9	9	ι , δ , ϵ , &c. <i>Sagittarii</i>	γ <i>Sagittarii</i>	270
8	Tow	24	24	ξ , τ , σ , ϕ , λ , μ <i>Sagittarii</i>	ϕ <i>Sagittarii</i>	279
9	Now	8	8	α , β , &c. <i>Orionis</i>	β <i>Orionis</i>	309
10	Nou	12	11	ϵ , μ , ν , &c. <i>Aquarii</i>	ϵ <i>Aquarii</i>	311
11	Hou	10	10	β <i>Aquarii</i> and another	β <i>Aquarii</i>	323
12	Wu	20	20	α <i>Aquarii</i> , θ , &c. <i>Pegasi</i>	α <i>Aquarii</i>	333
13	Shih	15	16	α , β <i>Pegasi</i> , &c.	α <i>Pegasi</i>	353
14	Poh	12	13	γ <i>Pegasi</i> , α <i>Andromedae</i>	γ <i>Pegasi</i>	8
15	Kwoi	12	11	β , δ , &c. <i>Andromedae</i> , &c.	β <i>Andromedae</i>	22
16	Low	13	13	α , β , γ <i>Andros</i>	β <i>Andros</i>	33
17	Woi	13	12	The three stars in <i>Blanca</i>	α <i>Blanca</i>	46
18	Maod	8	9	The <i>Plouades</i>	η <i>Plouades</i>	59
19	Poh	15	15	α , γ , δ , ϵ , &c. <i>Tauri</i>	ϵ <i>Tauri</i>	67
20	Tsuy	1	1	λ and others in head of <i>Orion</i>	λ <i>Orionis</i>	82
21	Thun	11	11	α , β , γ , δ , &c. <i>Orionis</i>	δ <i>Orionis</i>	83
22	Thung	31	31	γ , ϵ , λ , μ , &c. <i>Geminorum</i>	μ <i>Geminorum</i>	94
23	Kwai	4	5	γ , δ , η , θ <i>Gemini</i>	θ <i>Gemini</i>	125
24	Low	17	17	δ , ϵ , θ , &c. <i>Hydris</i>	δ <i>Hydris</i>	129
25	Sing	9	8	α , τ , &c. <i>Hydris</i>	α <i>Hydris</i>	146
26	Chang	18	18	ι , λ , μ , &c. <i>Hydris</i>	ι <i>Hydris</i>	155
27	Yon	17	17	α , &c. <i>Crataei</i>	α <i>Crataei</i>	173
28	Chun	13	13	β , &c. <i>Corvi</i>	γ <i>Corvi</i>	190
		360	360			

The degrees in the preceding Table are taken chiefly from a Chart which appeared to me to be the most trustworthy of several which are in the possession of the Royal Astronomical Society. It consists of a planisphere bounded by a circle, on which the degrees are marked as on the equator. Lines meeting in the centre and cutting this circle indicate the extent of each stellar division to the nearest degree without fractions, the first degree marking the vernal equinox. The numbers are from 1 to 360, the first being the 8th degree of β D Shih, determined by a Pegasi and a Andromedæ. There are two dates on this chart: the earliest, possibly that of its construction, is the 25th year of Koon Iung, 1760, and the second, indicating its subsequent reproduction, the 13th year of Koa King, 1808.

Many other charts and authorities have been consulted. I may mention an exceedingly fine compass, formerly in the possession of the late Admiral Smyth, and presented to me by his widow, Mrs Smyth. On it are twenty-four concentric circles, relating to the different purposes to which the compass is applied by the Chinese. Of these, two are devoted to the stellar divisions and their respective degrees, the one being of 360° the other of 365° . As there is a slight difference in the numbers of the chart and the compass I have in the preceding Table copied both.

It may also be necessary to observe that this Table contains the names of the 28 stellar divisions, with the degrees of each according to the before mentioned chart and the compass circle of 360° , together with the stars composing them determining astensions and the first degree of each stellar division. I have also introduced the determining stars of the stellar divisions according to Biot. And it may also be mentioned, that a line drawn from the centre through α Andromedæ cuts the fourth degree of the outer circle of the Chart. The other particulars that may be required to be known will be found in the Table of Stellar Divisions, and in the maps of these divisions in the Celestial Atlas, both of which form part of the Appendix.

The plan I have adopted in the translation of these Observations of Comets, in the MS. copy now in the library of the Royal Astronomical Society, is in every case to give the Chinese text in the original character, taken chiefly from the 'Encyclopedia' of Ma 'Tsan Lin and the 'Sho Ko'. The reason of this is founded on the experience not only of its utility in a philological point of view, but also from its absolute necessity in any critical examination of the results, as without it no definite opinion can be formed as to the real import of the Chinese words employed: and it is much to be regretted that it was found impracticable to reproduce it in the present publication, on account of the extreme difficulty in procuring the necessary means of so doing. It may also be observed that as, in every instance, not only are the Chinese characters given, but also the corresponding sounds in English, according to Morrison's Dictionary, any character can without difficulty be found in that portion of the said Dictionary which is arranged according to the syllables, and thus any one so inclined can, with a very little application, verify for himself: and although he may have scarcely any, or even no knowledge whatever of the language, he can readily ascertain whether the ideas expressed in the translation are in accordance with the meanings of the characters as given in that Dictionary.

I may also remark, that in the translation the word 'Ohih,' which is that by which

the measure of the length of the tail of a comet is expressed, is everywhere rendered by 'cubit,' instead of 'dogroo,' the word used by Biot and others. As I had resolved to make my version as literal as possible, I could not constantly express that word by any other term. It is evidently used by the Chinese to express the length of the tail of a comet in an indefinite sense, just as we should employ foot or yard for that purpose, and the estimated length is consequently of about the same value. Readers may, however, if they think it advisable, substitute the word 'dogroo' for 'cubit,' but it must be borne in mind that that word does not express the Chinese idea, and, consequently, cannot be depended upon any more than the other, as giving the exact length of the tail of a comet. The word in Chinese for dogroo is 'Too,' this is a definite measure, but I do not find it anywhere employed in these observations to express the length of the tail of a comet, the word Chih, 'cubit,' being invariably used. I may also observe, that I have found no instance of the word Chih being used to express a 'dogroo.'

The 'Tsun,' or tenth part of the cubit, appears to be its unit. The original Tsun, or that of the ancients, is said to have been formed by placing ten grains of a certain seed resembling our millet side by side, these seeds being of an oval form and pointed. The modern Tsun is estimated by placing ten of these seeds end to end, and thus there is a considerable difference between the ancient and modern Chih. The estimating the length of the Tsun by seeds is remarkable, as closely resembling our 'three barleycorns out of the middle of the ear' to make one inch. The relation of the measures of length that occur in the text is as follows:—

10 Tsun make 1 Chih,
10 Chih make 1 Chung

From what I can ascertain the Chih is rather more than an English foot, the Tsun being about an inch and a fraction.

From the preceding remarks it must be evident, that the production of this work has been attended with no ordinary amount of labour. Many thousands of Chinese characters required to be carefully copied and accurately translated, the whole of the dates ascertained by computation, and numerous works, both Chinese and European, had to be examined or collated. In addition to these, the construction of the Tables for computing the dates of their chronology, and of the Atlas, both of which have been found not merely useful but indispensable to the carrying on of the work, required a great amount of research and attention. How far the results may be worthy of the time and labour bestowed upon them, must be left for those who are better qualified than myself to form an opinion on such subjects, to determine. Errors may doubtless be found to exist, although every care has been taken to avoid them, and it is hoped that none seriously affecting the character of any part of the work will be found. It must, however, be remembered, that this is strictly a work of reference, and as such may, at some future period, be of service in investigations respecting the former appearance of any particular comet that may then pay us a visit.

I have already mentioned various Chinese works employed in this computation. In

In addition to these I must observe, that I have received much valuable information from works by European authors whose attention has been directed to Chinese astronomy and chronology. Among these I may mention Gaubil, whose '*Traité de la Chronologie Chinoise*' has been of great assistance. A paper by Ideler, in the '*Abhandlungen*' of the Berlin Academy for 1837, entitled '*Ueber die Zeitrechnung der Chinesen*,' has afforded much valuable information. Pingré's '*Cronologie*,' and J. B. Biot's '*Précis de l'Astronomie Chinoise*,' have also been consulted with advantage, and Ed. Biot's '*Catalogue des Comètes observées en Chine*,' published in the '*Comptes rendus de l'Académie des Sciences*' for 1846, has been carefully examined and collated, and I have much pleasure in testifying to the general accuracy of that work. Morrison's '*View of China*,' for philological purposes, has been found of great service, as affording much miscellaneous information.

I must also express my acknowledgments to the Rev. Professor Hammer, for his kindness in supplying me with Ma Twan Lun's '*Observations of Comets*,' which have been found of the greatest value, as affording information not to be met with readily, if at all, elsewhere. And also for his valuable assistance in looking out and supplying me with such Chinese type as was required in the subsequent part of this work, which has enabled me to present it in a more efficient form than I could have adopted otherwise.

In conclusion I have only to express my confident expectation, that in placing the MS. of this work in the library of the Royal Astronomical Society, it will be in the most likely position to be of service to future inquirers into the subject of Chinese Astronomy, and more particularly of that portion of it which relates to their Cometary observations.

JOHN WILLIAMS

April, 1871

NOTE.—It may be necessary to offer some explanation of the departure from strict chronological order in the following Index to the Cometary Observations. Thus in p. xxxviii after No. 269, and 1261, Nos. 270, and 941, to 277, and 1237, follow. These are observations made in another part of China by other Astronomers during two contemporaneous minor dynasties—the Later Han, A.D. 116–117, and the Jin, 1118–1236, and as I have strictly followed the arrangement of Ma Twan Lun, the above is the place in which they occur in his work. Some of these observations refer to comets noticed in the preceding accounts. Again, in the last column a number of observations, commencing in 1376, follow those ending in 1640. These are observations of the Kih Sui, or extraordinary stars, which form a separate section in the Astronomy of the Ming dynasty. It may also be noticed, that in A.D. 1837 many comets are recorded as having appeared. Two undoubtedly, and possibly a third of these observations, refer to comets previously observed in the same year. They are given as they occur in 'M. T. L.'

INDEX TO THE SUCCEEDING COMETARY OBSERVATIONS

No	Year & D	Month & Day	No	Year & D	Month & Day	No	Year & D	Month & Day
1	611	July	61	66	February 20	122	302	May
2	531	—	62	71	March 6	123	305	September
3	516	July	63	75	July 14	124	305	November 21
4	502	December	64	76	August 9	125	327	August
5	467	—	65	77	January 23	126	336	February 16
6	433	—	66	84	May 25	127	340	March 5
7	305	—	67	102	January 7	128	341	December 2
8	303	—	68	110	January	129	349	November 23
9	298	—	69	131	—	130	358	July 1
10	240	—	70	141	March 27	131	361	August
11	238	April	71	149	October 19	132	369	March
12	234	January	72	161	June 14	133	373	March 9
13	214	—	73	173	September	134	386	April
14	233	—	74	180	Winter	135	390	August 22
15	204	August	75	182	August	136	393	March
16	172	—	76	185	December 7	137	400	March 19
17	157	October	77	188	March	138	401	January 2
18	151	January	78	188	July 29	139	402	November 12
19	155	July	79	192	October 1	140	415	June 24
20	154	February	80	193	November	141	418	September 15
21	142	May	81	200	November 7	142	419	February 7
22	147	March 11	82	204	December	143	422	March 21
23	147	August 6	83	206	February	144	422	December 17
24	147	October	84	207	November 10	145	423	February 13
25	138	March	85	213	January	146	423	October 15
26	138	May	86	218	April	147	442	November 1
27	133	August	87	236	November	148	449	November 11
28	137	October	88	222	November 4	149	451	May 17
29	135	July	89	225	December 9	150	501	February 13
30	135	September	90	232	December 11	151	501	April 14
31	131	June	91	236	November 30	152	532	January 6 (P)
32	120	—	92	238	September	153	539	November 17
33	119	May	93	238	November 29	154	560	October 4
34	110	—	94	240	November 5	155	565	July 23
35	108 m 9	—	95	245	September 18	156	568	August 3
36	87	August	96	247	January 16	157	575	April 27
37	81	March	97	248	April	158	576	January 26
38	77	September	98	251	December 21	159	416	June 27
39	76	May	99	252	March 25	160	563	April 21
40	71	March	100	253	December	161	564	July 21
41	73	May 10	101	253	February	162	568	July
42	72	August 20	102	257	December	163	568	August
43	70	August 4	103	259	November 23	164	561	September 26
44	69	February	104	262	December 2	165	564	July 22
45	61	July	105	265	June	166	568	July 21
46	49	April	106	268	February 18	167	574	April 4
47	48	April	107	275	January	168	571	May 31
48	17	June	108	276	June 24	169	588	November 22
49	41	—	109	277	February	170	591	November 10
50	32	February	110	279	April	171	607	March 13
51	12	August 26	111	281	September	172	607	April 4
52	5	March 5	112	281	December	173	615	July
53	1	April	113	283	April 22	174	616	July
	A D		114	287	September	175	616	October
54	13	December	115	290	May	176	626	March 26
55	22	November	116	296	May	177	634	September 22
56	39	March 13	117	300	April	178	639	—
57	55	June 1	118	301	January	179	641	August 1
58	60	August 9	119	301	May	180	663	September 29
59	61	September 27	120	302	May	181	667	May 24
60	65	June 4	121	303	April	18	676	January 3

No	Year A D	Month & Day	No	Year A D	Month & Day	No	Year A D	Month & Day
183	676	July 7	246	1036	January 15	310	1452	March 21
184	681	October 17	247	1049	March 10	311	1456	May 27
185	683	April 20	248	1056	August	312	1457	January 14
186	684	July 8	249	1066	April 2	313	1457	June 15
187	684	September 13	250	1075	November 17	314	1457	October 26
188	707	November 16	251	1080	August 10	315	1461	August 5
189	708	March 10	252	1097	October 6	316	1465	March
190	708	September 21	253	1106	January 10	317	1465	September 18
191	710-713	—	254	1110	May 29	318	1472	January 16
192	730	June 30	255	1126	May 20	319	1490	December 31
193	739	March 27	256	1126	December	320	1500	May 8
194	760	May 16	257	1131	September	321	1506	July 31
195	760	May 20	258	1132	January 5	322	1506	August 10
196	767	January 12	259	1132	August 14	323	1520	January
197	770	June 15	260	1145	April 26	324	1531	July
197*	773	January 17	261	1145	June 4	325	1531	August 5
198	815	April	262	1147	January 6	326	1532	September 2
199	817	February 17	263	1147	January 12	327	1533	July 1
200	821	February 27	264	1151	August 21	328	1539	April 30
201	821	March 7	265	1222	September 15	329	1551	June 23
202	822	July 5	266	1232	October 18	330	1556	March 1
203	829	December	267	1240	January 31	331	1557	October 10
204	834	October 9	268	1240	January 23	332	1569	November 9
205	837	March 22	269	1264	July 26	333	1577	November 14
206	837	April 29	270	941	August 9	334	1580	October 1
207	837	May 1	271	1014	January 10	335	1582	May 20
208	837	May 21	272	1066	April	336	1585	October 3
209	837	June 17	273	1080	January 6	337	1591	April 9
210	837	June 26	274	1097	December 6	338	1593	July 20
211	837	September 9	275	1131	September 29	339	1596	July 26
212	838	November 11	276	1222	September 13	340	1607	September 11
213	838	November 21	277	1237	September 21	341	1612	November 16
214	839	February 7	278	1264	July 26	342	1619	January
215	839	March 12	279	1277	March 9	343	1639	Autumn
216	840	March 10	280	1293	November 7	344	1640	December 12
217	840	December 3	281	1299	June 24	345	1576	June 22
218	841	July	282	1301	September 16	346	1578	September 26
219	841	December 22	283	1301	January 3	347	1585	October 23
220	851	April	284	1313	April 13	348	1588	March 29
221	856	September 27	285	1315	November 28	349	1590	September 9
222	864	June 21	286	1337	May 4	350	1590	November 14
223	868	January	287	1337	June 26	351	1591	January 3
224	869	September 1	288	1340	March 24	352	1593	January 4
225	877	June	289	1351	November 24	353	1598	December 24
226	885	—	290	1356	September 21	354	1601	June 29
227	886	June 13	291	1360	March 12	355	1602	June 29
228	891	May 12	292	1362	March 5	356	1491	January 19
229	892	December	293	1362	June 29	357	1495	January 7
230	893	May 6	294	1363	March 16	358	1499	August 16
231	894	February	295	1366	October 25	359	1502	November 28
232	905	May 22	296	1368	January 7	360	1521	January 7
233	912	May 19	297	1368	April 8	361	1539	January 5
234	922	October 14	298	1373	May	362	1542	March 9
235	936	October 28	299	1391	May 23	363	1551	June 12
236	941	September 18	300	1407	December 14	364	1556	March 24
237	943	November 5	301	1431	May 15	365	1555	December 26
238	956	March 13	302	1432	February 9	366	1578	January 22
239	975	April	303	1432	February 10	367	1584	July 1
240	975	August 3	304	1433	September 15	368	1601	September 30
241	979	August 13	305	1439	March 25	369	1609	—
242	992	January 23	306	1439	July 12	370	1612	November 24
243	1003	December 23	307	1444	August 6	371	1618	December 5
244	1018	August 4	308	1449	December 20	372	1621	May 12
245	1035	September 15	309	1450	January 19			

No 207* makes up the full number 273

COMETS OBSERVED IN CHINA.

1

B C 611 *July*

DURING the period of the Chun Tsew, in the 14th year of the reign of Wan Kung, Prince of Loo, in the autumn, in the 7th moon, a comet entered into Pih Tow

The 'Chun Tsew' is a celebrated historical work, said to have been written by Confucius. It embraces the period between B C 722 and 481, and records the history of the princes of Loo, one of the minor states into which China was divided during the Chow dynasty. It was the native place of Confucius, and that in which he passed the greater portion of his life. In that work we are informed that the 14th year of Wan Kung corresponded with the 2nd year of the Emperor Kwang Wang, of the Chow dynasty, whose reign commenced B C 612. Hence the 14th year of Wan Kung was B C 611 7th moon, July

Pih Tow, the seven bright stars in Ursa Major

M T L

2

B C 531

In the winter of the 10th year of Chaou Kung, Prince of Loo, there was a comet to the left of Ta Shin. It extended to Hian

Chaou Kung, B C 531 10th year

Ta Shin. According to the Commentary this appears to be a star in one of the stellar divisions, Fang Sin or Wei, all of which are determined by stars in Scorpio. The conclusion seems to be, that Ta Shin is Antares

Hian, possibly Teon Hian, the Milky Way

M T L

3

B C 516 *July.*

In the 26th year of the same Prince, in the 6th moon, there was a comet near the star Tseu

Chaou Kung, B C 516 26th year, 6th moon, July

Star Tseu, II Hecules

M T L

4

B C 502 *December*

In the 13th year of Gae Kung, in the winter, the 11th moon, there was a comet in the east

Gae Kung, B C 502 13th year, 11th moon, December

M T L

B

CHOW DYNASTY, B C 1122-314

5

B C 467

In the 2nd year of the Emperor Ching Ting Wang a comet was seen

Emperor Ching Ting Wang, B C 468-441 2nd year, 467

M T L

6

B C 433

In the 8th year of the Emperor Knon Wang a comet was seen

Emperor Knon Wang, B C 440-424 8th year, 433

M T L

7

B C 305

In the 10th year of the Emperor Nan Wang a comet was seen

Emperor Nan Wang, B C 314-254 10th year, 305

M T L

8

B C 303

In the 12th year of the same Emperor a comet was seen

Emperor Nan Wang, B C 303 12th year

M T L

9

B C 296

In his 19th year a comet was seen.

Nan Wang, B C 296 19th year

M T L

TAN DYNASTY, B C 220-203

10

B C 240

In the 7th year of the reign of Ohe Hwang a comet first appeared in the east. It was afterwards seen in the north. In the 5th moon it was seen for 16 days in the west.

Ohe Hwang was the Emperor who is said to have caused all the books to be burned and the literati to be destroyed. This was done in order that he might be considered by posterity as the founder of the Chinese Empire. His reign over the Tan, one of the minor states, commenced B C 246. It was not until the 26th year he obtained the supreme power, and thus founded the Tan dynasty. His reign is reckoned from 246, hence his 7th year is B C 240 5th moon, May

M T L

11

B C 238 April

In the 9th year of the same Emperor a doubtful star was seen in the horizon. In the 4th moon it was seen in the west. It was also seen in the north, to the south of Tow, for 80 days.

Ohe Hwang, B C 238 9th year, 4th moon, April

Tow, most likely Pih Tow, the seven bright stars in Ursa Major

M T L

12

B C 234 *January*

In the 13th year of the same Emperor, in the 1st moon, a comet was seen in the east

Ch'e Hwang, n c 234 13th year, 1st moon, January *M T L*

13

B C 214

In his 33rd year a bright star appeared in the east

Ch'e Hwang, n c 214 33rd year *M T L*

14

B C 233

In the Astronomy of the Han dynasty it is recorded, that in the time of Ch'e Hwang, of the Tan dynasty, in his 15th year, four comets were seen during 80 days. They extended to the horizon

Ch'e Hwang, n c 233 15th year *M T L*

HAN DYNASTY, B C 206 to A D 264

15

B C 204 *August*

In the 3rd year of the Han Emperor, the 7th moon, there was a comet near Ta Koo *Sha Ke*

In addition, 'Ma T'wan Lun' gives the name of the Emperor, Kaou To

Kaou To, n c 206-195 3rd year, 7th moon, August, 204

Ta Koo, Aisturus

16

B C 172

In the 8th year of the Emperor Wan To a tailed star appeared in the east

Emperor Wan To, n c 179-157 8th year, 172 *Sha Ke*

17

B C 157 *October*

In the reign of the same Emperor, the 7th year of the epoch How Yuan, the 9th moon, a comet appeared in the west. From first to last it was in Stellar Divisions Wei and Ke. It pointed towards S D Hsu and Wei. It was about 10 cubits in length, and extended to 'Toon Han'. After 16 days it was no longer seen.

Wan To, epoch How Yuan (the first of the epochs), n c 163-157 7th year, 157, 9th moon, October

Stellar Division Wei determined by α , μ , ν , &c in Scapio

Ke determined by γ , δ , ϵ , &c Sagittarii

Hsu determined by β Aquarii and another

Wei determined by α Aquarii and θ , ϵ Pegasus

Toon Han, the Milky Way

It must be observed here, that in the list of the S D there are no fewer than four whose names are expressed in English characters by Wei of these, two occur in the description of this comet. The original characters of the whole of these are totally unlike *M T L*

18

B C 154 *January*

In the 2nd year of the Emperor King To there was a comet in the south west
Emperor King Ta, B C 156-141 2nd year, 155, 12th moon, 154, January
There was no epoch for the first seven years of King To

19

B C 155 *July*

In the 6th moon of the same year a comet appeared in the north east
6th moon, 155, July

She Ke

20

B C 154 *February*

In the 31d year, 1st moon, a tailed star was seen in the west
King Ta, B C 154 31d year, 1st moon, February

She Ke

21

B C 148 *May*

In the 2nd year of the epoch Chung Yuen, the 4th moon, there was a comet in the north west

Epoch Chung Yuen, B C 149-144 2nd year, 148, 4th moon, May
Chung Yuen was the first epoch of King To

She Ke

22

B C 147 *March 14*

In the 31d year of the epoch Chung Yuen, the 31d moon, on the day Ting Yow, a comet was seen at night in the north-west its colour was white. It was 10 cubits in length. Its place was in Tsuy Ho. As it passed on it increased but little in size. After 15 days it was no longer seen.

Chung Yuen, B C 147 31d year, 31d moon, day Ting Yow, March 14.
Tsuy Ho, possibly S D Tsuy, λ and others in head of Orion

She Ke, M T L

23

B C 147 *August 6*

In the 31d year of the epoch Chung Yuen, the 6th moon, on the day Jin Souh, there was a comet in the south west. It was in the southern part of S D Fang. When it left Fang it was 20 cubits in length. It was as large as a two tow vessel. Its colour was white. On the day Kwai Hoo its place was to the north-east of S D Sin. Its length was then 10 cubits. On the day Kaa Tze it was in S D Wei. On the day Ting Maou it entered S D Ke, to the north, near the star Han. It gradually lessened,

until it resembled a peach. On the day Tin Shin it disappeared, having been visible altogether for 10 days.

Epoch Chung Yuen, B.C. 147 1st year, 6th moon, day Jin Souh, August 6th,
day Kwei Hae, August 7th, Koa Tse, August 8th, Ting Maou, August 11th,
Tin Shin, August 16th

S D Sin, determined by Antares and others in Scorpio

Wei determined by ϵ , μ , ν , and others, in Scorpio

Ko determined by γ , δ , ϵ Sagittarii and others

Star Han, ζ Ophiuchi

Sho Ko

24 B.C. 147 October

In the 9th moon of the same year there was a comet in the north-west

Chung Yuen, B.C. 147 9th moon, October

25 B.C. 138 March

In the reign of the Emperor Woo Te, the 3rd year of the epoch Kean Yuen, the 2nd moon, there was a comet in S D Chang. It passed through Tao Wei into Tse Kung. It went into Teen Han. The 'Chun Tsew' says the comet was in Pih Tow.

Emperor Woo Te, B.C. 140-87, epoch Kean Yuen, 140-135 B.C. 138, 3rd year, 2nd moon, March

S D Chang determined by κ , λ , μ , ν , ϕ Hydrae

Tao Wei, space between stars in Leo and Virgo

S'e Kung, circle of perpetual apparition

Teen Han, the Milky Way

Pih Tow, bright stars in Ursa Major

M T L

26 B.C. 138 May

In the 4th moon of the same year there was a comet in Teen Ko. It passed into Ohih Neu.

Epoch Kean Yuen, B.C. 138 3rd year, 4th moon, May

Teen Ko, θ and others in Hercules

Ohih Neu, α and two other stars in Lyra

M T L

27 B.C. 138 August

In the 7th moon of the same year there was a comet in the north-east

B.C. 138 7th moon, August

M T L

28 B.C. 137 October

In the 4th year of the same epoch, 9th moon, there was a comet in the north-east

Kean Yuen, B.C. 137 4th year, 9th moon, October

M T L

29

B C 135 *July*

In the 6th year of the same epoch, the 6th moon, there was a comet in the west

Keen Yuen, B C 135 6th year, 6th moon, July

M T L

30

B C 135 *September*

In the 8th moon of the same year there was a comet in the east its tail extended across the heavens It was visible for 30 days

Keen Yuen, B C 135 6th year, 8th moon, September

M T L

31

B C 134 *June*

In the 1st year of the epoch Yuen Kwang, the 6th moon, a strange star was seen in S D Fang

Epoch Yuen Kwang, B C 134-129 1st year, 6th moon, 134, June

S D Fang determined by β , δ , π , and others, in Scorpio

She Ke

32

B C 120

In the 3rd year of the epoch Yuen Show, in the spring, there was a comet in the East

Epoch Yuen Show, B C 112-117 3rd year, 120

She Ke

33

B C 119 *May*

In the 4th year of the same epoch, in the 4th moon, a comet appeared in the north-west

Yuen Show, 4th year, B C 119 4th moon, May

M T L

34

B C 110

In the 1st year of the epoch Yuen Fung, the 5th moon, there was a comet in the eastern part of the S D Tung It was in San Tse

Epoch Yuen Fung, B C 110-105 1st year, 5th moon, 110

S D Tung, γ , ϵ , μ , ν , and others, in Gemini

San Tse, the foot of Ursa Major

M T L Tung Keen

35

B C. 109 or 108

In the middle of the epoch Yuen Fung there was a comet in Ho Shoo

Yuen Fung, middle B C 109 or 108

Ho Shoo, unascertained

M T L Tung Keen

36 B C 87 August

In the 2nd year of the epoch How Yuan, the 7th moon, there was a comet in the east

How Yuan, B C 88-87 2nd year, 7th moon, 87, August Tung Koon

37 B C 84 March

In the reign of the Emperor Chaou To, the 3rd year of the epoch Che Yuen, the 2nd moon, there was a comet in the north-west

Emperor Chaou To, B C 86-74, epoch Che Yuen, 86-81 3rd year, 2nd moon, 84, March Tung Koon

38 B C 77 September

In the 4th year of the epoch Yuen Fung, the 9th moon, there was a strange star in the middle of Taro Kung It was between the stars Ohoo in Tow and Koih

Epoch Yuen Fung, 80-75 4th year, 9th moon, 77, September

Taro Kung, circle of perpetual apparition

Tow, the seven stars in Ursa Major

Ohoo, α Ursa Majoris

Koih, Polaris

She Ko

39 B C 76 May

In the 5th year of the same epoch, the 4th moon, a bright star was seen between the S D Kwei and Low

Yuen Fung, B C 76 5th year, 4th moon, May

S D Kwei determined by β , δ , ϵ , and others in Andromeda, and stars in Pisces

Low determined by α , β , γ Arietis

She Ko

40 B C 74 March

In the 1st year of the epoch Yuen Ping, the 2nd moon, there was a large falling star like the moon Many stars followed, all going to the west

Epoch Yuen Ping, B C 74 2nd moon, March

This appears to have been a large meteor

Tung Koon

41 B C 73 May 10

In the reign of Souen To, the 1st year of the epoch Pun Ohe, the 4th moon, on the day Jin Souh, early in the evening, a tailed star appeared to the west of the S D Tean

Emperor Souen To, B C 73-49, epoch Pun Ohe, 73-70 1st year, 4th moon, day Jin Souh, 73, May 10

S D Tean, determined by α , β , γ , δ , & ϵ Orionis

She Ko

42

B C 72 *August 20*

In the 2nd year of the same epoch, the 7th moon, on the day Sun Hsao, a comet appeared in S D Yih

Pun Oho, n o 72 2nd year, 7th moon, day Sun Hsao, August 20

S D Yih, determined by α and other stars in Crater

She Ke

43

B C 70 *August 4*

In the 4th year of the same epoch, the 7th moon, day Koa Shin, a comet appeared in S D Yih it passed near the moon

Pun Oho, n c 70 4th year, 7th moon, day Koa Shin, August 4

S D Yih, determined by α and others in Crater

She Ke

44

B C 69 *February*

In the 1st year of the epoch To Tsoo, the 1st moon, there was a comet in the west

Epoch To Tsoo, n c 69-66 1st year, 1st moon, 69, January

M T L

45

B C 61 *July*

In the 1st year of the epoch Shin Tsoo, the 6th moon, there was a comet in the east

Epoch Shin Tsoo, n c 61-58 1st year, 6th moon, 61, July

She Ke

46

B C 49 *April*

In the 1st year of the epoch Han Lung, the 3rd moon, a strange star appeared to the north-east of Wang Leang it was about 9 cubits in length Its direction was to the west It appeared between Ko Tsoo and Tsoo Kung, into which it entered

Epoch Han Lung, n o 49 1st year, 3rd moon, 49, April

Wang Leang, β Cassiopeia

Ko Tsoo, ν , ξ , and others, in Cassiopeia

Tsoo Kung, circle of perpetual apparition

She Ke

47

B C 48 *April*

In the reign of Yuan Te, the 1st year of the epoch Choo Yuan, the 3rd moon, a strange star, resembling a large melon, was seen Its colour was a bluish white Its place was in Nan Tow, near the second star It was about 4 cubits in length

Emperor Yuan Te, n c 48-33, epoch Choo Yuan, 48-44 1st year, 3rd moon, 48, April.

Nan Tow, same as S D. Tow, determined by ζ , τ , σ , and others, in Sagittarius

She Ke

48

B O 47 June

In the 2nd year of the epoch Choo Yuen, the 5th moon, a comet was seen in the degrees of S D Maou. It was about 5 cubits to the east of Kouen Sho. Its colour was a bluish white. It was bright, and about $\frac{1}{10}$ ths of a cubit in length.

Epoch Choo Yuen, n o 47 and year, 5th moon, June

S D Maou, determined by the Pleiades

Kouen Sho, ϵ , ν , and others in Pegasus

Sho Ko

49

B O 44

In the 5th year of the same epoch a comet appeared in the north-east its colour was a reddish yellow. It was 8 cubits in length. A few days after, its length was about 10 cubits. It was then in the north-east, pointing towards the S D Tsan. After about two months (ρ) it turned again to the west.

Epoch Choo Yuen, 5th year n o 44

S D Tsan, determined by α , β , and others in Orion

Sho Ke, M T L

The duration of this comet is doubtful

50

B O 32 February.

In the reign of Ching To, the 1st year of the epoch Keen Ohe, the 1st moon, there was a comet in Ying Shih its colour was a bluish white. It was from 60 to 70 cubits in length, and about 1 cubit in width.

Emperor Ching To, n o 32-47, epoch Keen Ohe, 32-29 1st year, 1st moon, 32, February

Ying Shih, same as S D Shih, determined by α Pegasus and others *M T L*

51

B O 12 August 26

In the 1st year of the epoch Yuan Yen, the 7th moon, day Sin Wei, there was a comet in the eastern part of S D Tsang. Its course was towards Woo Choo How. It appeared to the north of Ho Shoo, and advanced towards Hoan Yuen and Tao Wei. It afterwards progressed at the rate of about 6 degrees in a day. In the morning it was seen in the east. On the 13th day, in the evening, it appeared in the west. It passed over the Tao Fe and other neighbouring stars. It afterwards went into Ta Ho Tung, in the middle of Tao Kung. It then passed round Teon Ho, and having left the boundaries of — How it went to the south, and passed over Ta Koo and Ohe Te. It entered Teon Sho, and remained there during that lunation. It advanced slowly to the middle of Teon Sho, and afterwards left it to the west. On the 56th day it set with Tsang Lung.

It is greatly to be regretted, that in the original work from which this account is taken many parts of the text are so indistinct, on account of injury to the block, that not only are some of the characters entirely obliterated, but others are so imperfect as to render their translation very uncertain, as they are almost illegible

I have done the best I could under these circumstances, and believe the translation to be substantially correct. The notice of this comet in the 'Sho Ke' is exceedingly brief.

Epoch Yuen Yen, B.C. 12-9 1st year, B.C. 14, 7th moon August Day Sun
Wai, August 26

S D Tain determined by γ , ϵ , λ , μ , & Gemmaurum

Woo Choo How, θ , ν , τ , & Gemmaurum

Ho Choo appears to be the same as Pih Ho, α , β , & Gemmaurum

Hsen Yuen, α , γ , η , and others in Leo and Leo Minor

Tsao Fe, ζ , μ , & Leonis

Other characters, possibly names of stars, occur here which are not to be found in any of the lists I have seen they, therefore, have not been identified

Ho Tung not identified

Tso Kung, circle of perpetual apparition

— How not identified, the preceding characters being illegible

Ta Koo, Arcturus Sho To, stars in the foot of Bootes

Toon Ho, the Milky Way

Tao Wai, space between stars in Leo and Virgo

Toon Sho, space within the stars in Scorpens

Tsang Lung, the Azure Dragon, one of the four divisions of the heavens, comprising our signs Libra, Scorpio, and Sagittarius M T L

52

B.C. 5 *March 5*

In the reign of the Emperor Gao To, the 2nd year of the epoch Koon Ping, the 2nd moon, a comet appeared in Kean Now for about 70 days

Emperor Gao To, B.C. 6-1, epoch Koon Ping, 6-3 2nd year, 2nd moon,
B.C. 5, March

Kean Now, same as S D Now, determined by α , β , & Capricorn M T L

53

B.C. 4 *April*

In the 31d year of the same epoch, the 31d moon, there was a comet in Ho Koo

31d year of epoch Koon Ping, B.C. 4 31d moon, April

Ho Koo, α , β , γ , & Aquila

Tung Koon

54

A.D. 13 *December*

In the reign of Wang Mang, the 5th year of the epoch Koon Kwo, the 11th moon, a comet appeared

Wang Mang, a chieftain who usurped the Imperial dignity A.D. 9-22

Epoch Koon Kwo, A.D. 9-13 5th year, 11th moon, A.D. 13, December

Sho Ke

55

A D 22 November

In the 31d year of the epoch To Hwang, the 11th moon, there was a comet in S D Ohang. It went to the south-east. After 5 days it was no longer seen.

Epoch To Hwang, A D 20-22 31d year, A D 22 11th moon, November

S D Ohang determined by κ , λ , μ Hydraz

See Ke, M T L

56

A D 39 March 13

In the reign of the Emperor Kwang Woo, the 15th year of the epoch Keon Woo, the 1st moon, on the day Ting Wei, a comet was seen in S D Maou. It was bright, 30 cubits in length, broad, and spreading like a tree. It went gradually to the north-west. It entered Ying Shih and passed into Lo Kung. In the 2nd moon, on the day Yih Wei, it passed into the eastern part of S D Puh and disappeared. It was visible for 49 days.

Emperor Kwang Woo, A D 25-57, epoch Keon Woo, 25-55, 15th year, A D 39 1st moon, day Ting Wei, March 13, 2nd moon, day Yih Wei, April 30

S D Maou determined by the Pleiades

S D Puh determined by γ Pegasus and α Andromeda

S D Shih determined by α , β Pegasus, &c Ying Shih, α Pegasus

Lo Kung, three groups of stars, of two each, in Pegasus, being λ , μ , η σ , and ν , τ , and forming part of S D Shih

See Ke, M T L

57

A D 55 June 4

In the 30th year of the same epoch, in the intercalary moon, on the day Ke Woo, the planet Mercury being about 20 degrees in the eastern part of the S D Tang, a white vapour appeared, pointing to the south-east. It was bright, and 10 cubits in length. It proved to be a comet. It went to the north-east. It passed above the western boundary of Tso Kung. In the 5th moon, day Koa Tso, it was no longer visible. It was seen altogether for 31 days.

Epoch Keon Woo, A D 55 30th year, intercalary moon 'M T L' informs us that this was the intercalary 4th moon, consequently the day Ke Woo is June 4

5th moon, day Koa Tso, July 4

Tso Kung, same as Tso Wei Yuen, suale of perpetual apparition

See Ke, M T L

58

A D 60 August 9

In the reign of Ming To, the 31d year of the epoch Yung Ping, the 6th moon, on the day Ting Maou, a comet appeared to the north of Tso Chuan. It was 2 cubits in length. It gradually went to the north, and entered the S D Kang to the south. It was visible 185 days.

Emperor Ming Te and epoch Yung Ping, A D 58-75 31d year, A D 60, 6th moon, day Ting Maou, August 9

S D Kang determined by ι , κ , λ , θ Virginis

Teen Ohuen, α , γ Persei, &c

Sho Ke, M T L

59

A D 61 *September 27*

In the 4th year of the epoch Yung Ping, the 8th moon, day Sun Yow, a strange star appeared to the north west of Kang Ho. It pointed towards Kwan Soo. It was visible for 70 days

Epoch Yung Ping, A D 61 4th year, 8th moon, day Sun Yow, September 27

Kang Ho, δ Bootis Kwan Soo, Corona Borealis

Sho Ke

60

A D 65 *June 4*

In the 8th year of the same epoch, the 6th moon, on the day Jin Woo, a comet appeared in the 37th degree of the S D Lew and Chang. It entered Heen Yuen and passed through Teen Ohuen. It passed into Tse Wei. The vapour (tail) extended to Shang Keae. It was seen altogether for 56 days

Yung Ping, 8th year, A D 65 6th moon, day Sun Woo, June 4.

S D Lew determined by δ , ϵ , and others in Hydra

S D Chang determined by κ , λ , μ , and others in Hydra.

Heen Yuen, α , γ , ϵ , η , and others in Leo and Leo Minor

Teen Ohuen, α , γ , δ , and others in Perseus

Shang Keae, possibly stars in Virgo

Tse Wei, space between stars in Leo and Virgo

Sho Ke, M. T L

61

A D 66 *February 20*

In the 9th year of the same epoch, the 1st moon, day Woo Shin, a strange star appeared in S D New. It was 8 cubits in length. It passed through Koon Sing. It arrived at the south of S D Fang and then disappeared. It was visible 50 days

Epoch Yung Ping, A D 66 9th year, 1st moon, day Woo Shin, Feb 20

S D New determined by α , β , &c Capricorni

S D Fang determined by β , δ , π , and others in Scapio

Koon Sing, ν , ξ , σ , and others in Sagittarius

Sho Ke

62

A D 71 *March 6*

In the 14th year of the same epoch, the 1st moon, day Woo Tse, a strange star was seen for 60 days. It appeared first in S D Maou. It went into Heen Yuen and disappeared to the right of S D Keo

Yung Ping, 14th year, A D 71 1st moon, day Woo Tse, March 6

S D Maou determined by the Pleiades

S D Keo determined by α and ζ Virginis

Heen Yuen, α , γ , ϵ , η , and others in Leo and Leo Minor

Sho Ke

63

A D 75 July 14

In the 18th year of the epoch Yung Ping, the 6th moon, day Ke Wei, a comet appeared in S D Ohang. It was 3 cubits in length. It turned and entered Lang Tseang. It passed into the south of Tao Wei.

Yung Ping, A D 75 18th year, 6th moon, day Ke Wei, July 14

S D Ohang determined by α , λ , μ , and others in Hydra

Tao Wei, space between stars in Leo and Virgo

Lang Tseang, Coma Berenices

See Ke, M T L

64

A D 76 August 9

In the reign of Ohang To, the 1st year of the epoch Keen Choo, the 8th moon, day Kang Yin, a comet appeared in Toon Sho. It was 3 cubits in length. It passed on slowly into 3 degrees of Keon New. After 40 days it gradually disappeared.

Emperor Ohang To, A D 76-88, epoch Keen Choo, 76-83, 1st year, 76 8th moon, day Kang Yin, August 9

Keon New for S D New, determined by α , β , and others in Capricornus

Toon Sho, space bounded by Scorpens

See Ke, M T L

65

A D. 77 January 23

In the same year, the 12th moon, day Woo Yin, a comet appeared in 3 degrees of the S D Low. Its length was from 8 to 9 cubits. It slowly entered Tze Kung as far as the middle. After 106 days it gradually disappeared.

Keon Choo, 1st year, A D 76 12th moon, day Woo Yin, A D 77, January 23

S D Low determined by α , β , γ Antares

Tze Kung, circle of perpetual apparition

See Ke, M T L

The 'Sho Ke' has the 11th moon of the 2nd year

66

A D 84 May 25

In the 1st year of the epoch Yuen Ho, the 4th moon, day Ting Sze, an extraordinary star appeared in the morning to the east. Its place was in the 18th degree of the S D Wei. It was 3 cubits in length. It passed over Ko Taou and entered Tze Kung. On the 40th day it disappeared.

Epoch Yuen Ho, A D 84-86 1st year, 84, 4th moon, day Ting Sze, May 25

S D Wei determined by the three stars in Musca

Ko Taou, ν , ξ , σ , π Cassiopeia

Tze Kung, circle of perpetual apparition

See Ke

67

A D 102 January 7

In the reign of the Emperor Ho To, the 12th year of the epoch Yung Yuen, the 11th moon, on the day Kwai Yow, in the evening, a greenish-white vapour was seen,

about 30 cubits in length, commencing in Teen Yuen, to the north-east. It pointed to Koon She. It was seen altogether for 10 days.

Emperor Ho Ta, A D 59-105, epoch Yung Yuen, 89-101 12th year, 101, 11th moon, day Kwei Yew, 102, January 7

Teen Yuen, ι , κ , χ , ϕ Eridani

Koon She, β Canis Majoris

She Ke

68

A D 110 January

In the reign of the Emperor Gan To, the 3rd year of the epoch Yung Choo, the 12th moon, a comet was seen to the south of Teen Yuen. It pointed towards the north-east. It was 6 or 7 cubits in length, and was of a greenish white colour.

Emperor Gan To, A D 107-125, epoch Yung Choo, 107-113 3rd year, 109, 12th moon, January

Teen Yuen, γ , δ , ϵ , and others in Eridanus

The Teen Yuen here mentioned must not be confounded with that in the preceding account, the characters being quite different, although of the same sound.

M T L

69

A D 131

In the reign of the Emperor Shun To, the 6th year of the epoch Yung Koon, a comet appeared in S D Tow and Koon New. It disappeared in S D Hou and Wei.

Emperor Shun To, A D 126-144, epoch Yung Koon, 126-131 6th year, 131

S D Tow determined by ζ , τ , σ , and others in Sagittarius

Koon New same as S D New, determined by α and others in Capricornus

Wei determined by α Aquarii and γ Pegasi

M T L

Biot's date is 132

70

A D 141 March 27

In the 6th year of the epoch Yung Ho, the 2nd moon, day Tung Sze, a comet was seen in the east. It was 6 or 7 cubits in length. Its colour was a bluish white. It pointed south-west to Ying Shih, and extended to the stars Fun Moo. On the day Tung Chow the comet was about 1 degree in the S D Kwa. Its length was 6 cubits. On the day Kwei Hae it was seen in the morning to the north-west. It passed through the S D Maou and Peih. On the day Kee Shin it entered the eastern part of S D Tung. It went on and passed through S D Kwa and Low, and the seven stars in Chang. It was very bright, and extended to San Tse. It passed into the middle of Heen Yuen and then disappeared.

She Ke, M T L

Epoch Yung Ho, A D 136-141 6th year, 141, 2nd moon, day Tung Sze,

March 27 Other days Tung Chow, April 16, Kwei Wei, April 22, Koa Shin,

April 23

S D Ying Shih or Shih, determined by α , β Pegasi, &c

Maou determined by the Pleiades

S D Psh determined by α , γ , δ , &c in Taurus
 S D Kwa determined by β , δ , ϵ , &c in Andromeda and Pisces
 S D Low determined by δ , ϵ , &c Hydor
 S D Ohang determined by α , λ , μ , &c Hydor
 Fun Moo, γ , η , π Aquarii
 Heen Yuen, α and others in Leo and Leo Minor

According to 'M T L' this comet appeared in the epoch Yung Koon, the account being in other respects precisely the same. This would make the date 10 years earlier, viz 131, and the days would be, Ting Szo, March 20, Ting Chow, April 9, Kwa Wai, April 15, and Kea Shin, April 16

71

A D 149 October 19

In the reign of the Emperor Hwan To, the 31d year of the epoch Koon Ho, the 8th moon, day Yih Chow, a bright comet, 5 cubits in length, was seen in the middle of Toon Sho, to the south-east. Its colour was a yellowish white. In the 9th moon, on the day Woo Shin, it was no longer seen.

Emperor Hwan To, A D 147-167, epoch Koon Ho, 147-149 31d year, 149, 8th moon, day Yih Chow, October 19, day Woo Shin, October 22

Toon Sho, space bounded by Serpens

Sho Ke

'M T L' has the 1st instead of the 31d year. In the 'Sho Ke,' observations of Venus and other planets are recorded as having been made in the 1st and 2nd years of this epoch, and also in the 8th moon of the 31d year. These are followed by the account of the comet as above. As the text in 'M T L' is in other respects precisely similar, there is therefore no doubt as to the correctness of the year as given in the 'Sho Ke.'

72

A D 161 June 14

In the 4th year of the epoch Yen Ho, the 5th moon, on the day Sun Yow, a strange star was seen in Ying Shih. It progressed slowly. The tail became 5 cubits in length. It passed into the 1st degree of S D Sin. It turned and appeared as a comet.

Epoch Yen Ho, A D 158-166 4th year, 161, 5th moon, day Sun Yow, June 14

S D Ying Shih, or Shih, determined by α Pegasus, &c

S D Sin, determined by α , σ , τ in Scorpio

Sho Ke, M T L

73

A D 178 September

In the reign of the Emperor Tang To, the 1st year of the epoch Kwang Ho the 8th moon, a comet appeared in the north of S D Kang. It passed into the middle of Toon Sho. It measured a cubit in length. It gradually increased in length until it measured from 50 to 60 cubits. Its colour was reddish. It passed through about 10 stellar divisions in about 80 days, and then disappeared in the middle of Toon Yuen.

Emperor Lang To, A D 168-189, epoch Kwang Ho, 178-183 1st
8th moon, September

S D Kang determined by ν , α , λ , θ Virgins

Tsen Sho, space bounded by Serpens

Tsen Yuen, γ , δ , ϵ , and others in Eridanus

She Ke,

74

A D 180

In the 3rd year of the same epoch a comet appeared to the east of Lang
entered into S D Chang and then disappeared

Epoch Kwang Ho, 3rd year, A D 180

S D Chang determined by α , λ , μ , &c Hydus

Lang Ho, Sirius and other stars in Canis Major

She Ke,

75

A D 182 *August*

In the 5th year of the same epoch, the 7th moon, a comet appeared bet
Tao It went to the east It entered The Wei It passed Tao Tse and TI
In about 20 days it disappeared

Kwang Ho, 5th year, A D 182 7th moon, August

San Tao, the stars in the feet of Ursa Major

The Wei, space between Yugo and Leo

Tao Tse, β Leonis

Hing Chin, a star in Coma Berenices, near ϵ Leonis

'M T L' has the 4th year of this epoch, A D 181

76

A D 185 *December 7*

In the 2nd year of the epoch Chung Ping, the 10th moon, on the day Kw
strange star appeared in the middle of Nan Mun It was like a large bamboo
displayed the five colours, both pleasing and otherwise It gradually lessened
6th moon of the succeeding year it disappeared

Epoch Chung Ping, A D 184-189 2nd year, 185, 10th moon, day K
December 7, A D 186 6th moon, July

Nan Mun, α Centauri and stars near

Biot's date is December 10, 173, and his epoch is Cho Ping In the '
the epoch is precisely as here given, and no epoch Cho Ping is to be found
this time in the Tables The epoch in which the year 173 occurs is I
but no comet or extraordinary star is recorded in the 'She Ke' as having
at that time. Biot's day would be quite correct for A D 173, but is not so
No comet is to be found in 'M T L' or the 'Tung Keen' under either
dates

77

A D 188 *March*

In the 5th year of the same epoch, the 2nd moon, a comet appeared in S D Kwan. It went the contrary way and entered Tse Kung. After having been seen for about 60 days it disappeared.

Ohung Ping, 5th year, A D 188 2nd moon, March

S D Kwan determined by β , δ , ϵ Andromeda and stars in Pisces

Tse Kung, the circle of perpetual apparition

She Ko

In 'M T L' the account of this comet is placed under the epoch Kwang Ho, and Ohung Ping does not appear as an epoch, but Kwang Ho occurs twice as an epoch, which is unusual. It appears, therefore, that there is a typographical error in 'M T L,' and that Ohung Ping should here be substituted for Kwang Ho. This would make the 'She Ko' and 'M T L' consistent with each other.

78

A D 188 *July 29*

In the 6th moon of the same year, day Ting Maou, a strange star, like a 3-shing measure, appeared in Kwan Soo. It went to the south west. It entered Toon She, passed on to S D Wei, and disappeared.

A D 188 6th moon, day Ting Maou, July 29

S D Wei determined by ϵ , μ , ν , and others in Scorpio

Toon She, space bounded by Scorpions

Kwan Soo (also called Shih Soo), Corona Borealis

She Ko

A shing is described as a certain measure, containing 120,000 grains of millet.

Biot dates this comet, Kwang Ho, 5th year, 6th moon, 182, June 30. As in the former instance, the date I have given is that of the 'She Ko'. Three comets are recorded in the 'She Ko,' under the epoch Kwang Ho, which are not in Biot: they occur in the 1st (n c 178), the 3rd (n c 180), and 5th (n c 182) years of that epoch. In the 'Tung Koon Kang Muh' they are also given under the epoch Kwang Ho, as well as that of the 5th year of Ohung Ping (n c 188, July), also not in Biot. That of the 2nd year, and the present one, do not occur in the 'Tung Koon' under the epoch Ohung Ping. They are not in 'M T L'.

79

A D 192 *October*

In the reign of the Emperor Hoon To, the 3rd year of the epoch Ohoo Ping, the 9th moon, a comet was seen. It was about 100 cubits in length. Its colour was white. It appeared to the south of the S D Koo and Kang.

Emperor Hoon To, A D 190-220, epoch Ohoo Ping, 190-193 9th moon, October

S D Koo determined by α Virginis and another

S D Kang determined by ι , κ , λ , μ , ρ Virginis

M T L

80

A D 193 *November*

In the 4th year of the same epoch, the 10th moon, a comet appeared between the two Keos. It went to the north east. It entered Teen She as far as the middle, and disappeared.

Choo Ping, 4th year, 193 10th moon, November

The two Keos S D Keo determined by a Virginis and another Ta Kuo, Aieturus

Teen She, the space bounded by Serpens

She He, M T L

81

A D 200 *November 7*

In the 5th year of the epoch Koon Gan, the 10th moon, day Sin Mao, there was a comet in Ta Leang.

Epoch Keen Gan, 10 196-220 5th year, 200, 10th moon, day Sin Mao, November 7th

Ta Leang, unascertained

M T L

82

A D 204 *December*

In the 9th year of the same epoch, the 11th moon, a comet appeared in the eastern part of S D Tang, near to S D Kwei. It entered Hoon Yuen and Tse Wei.

Epoch Keen Gan, 9th year, A D 204 11th moon, December

S D Tang determined by δ , ϵ , λ , &c. Geminorum

S D Kwei determined by γ , δ , η , θ Cancer

Heen Yuen, α and others in Leo and Leo Minor

Tse Wei, space in Leo and Virgo

She Ke, M T L

83

A D 206 *February*

In the 11th year, 1st moon, there was a comet in Pih Tow. The head was in the middle of that asterism. It was also seen in S D Wei, in Kwan, and in Tse Kung, and in the morning it extended towards the north.

Keen Gan, 11th year, A D 206 1st moon, February

S D Wei determined by ϵ , μ , ν , and others in Scorpion

Kwan, possibly Corona Borealis

Tse Kung, circle of perpetual apparition

Pih Tow, the seven bright stars in Ursa Major

She He, M T L

84

A D 207 *November 10*

In the 12th year, 10th moon, day Sin Mao, there was a comet in Shun Wei.

Keen Gan, 12th year, A D 207 10th moon, day Sin Mao, November 10

Shun Wei, one of the twelve kung, or signs, answering to Virgo

She Ke, M T L

85

A D 213 *January*

In the 17th year, 12th moon, there was a comet in Woo Choo How

Kean Gan, 17th year, A D 213 12th moon, January

Woo Choo How, θ , ι , ν , τ , ϕ Geminorum

Sho Ko, M T L

86

A D 218 *April*

In the 23rd year of the same epoch, in the 3rd moon, a comet was seen in the morning, in the east, for about 20 days. In the evening it appeared in the west. It entered and passed through Woo Chay, Tung Tsing, Woo Choo How, Wan Chang, Heen Yuan, How Fo, and Tao Wai. It was pointed and bright. Its course was towards Te Tso.

Kean Gan, 23rd year, A D 218 3rd moon, April

Woo Chay, α , β , γ , δ , ϵ , ζ , η , θ , ι , κ , λ , μ , ν , ξ , ζ Tauri

Tung Tsing, the eastern part of S D Tsing, determined by δ , ϵ , λ , &c Geminorum

Woo Choo How, θ , ι , ν , τ , ϕ Geminorum

Wan Chang, θ , ϕ , ν Ursa Majoris

Heen Yuan, α and others in Leo and Leo Minor

How Fo, unascertained

Tao Wai, α Hercules

Tao Wai, space between stars in Leo and Virgo

Sho Ko, M T L

87

A D 236 *November*

In the reign of How Choo, the 14th year of the epoch Koon Hing, there was a comet in the east.

How Choo, 223-264, epoch Koon Hing, 223-237 14th year, 236, 10th moon, November

For further particulars respecting this comet see No 91

At the close of the Han dynasty China was divided into three principal states, Wei, Woo, and Shuh. This was the celebrated period of the San Kwo, or Three Nations. The Shuh was a branch of the Han, and under the name of the How, or later Han, has a place among the regular dynasties. It maintained the supreme power until A D 264, when the Wei, until then a minor state, obtained the superiority, and founded a new dynasty, under the name of the Tsin. The comets which immediately follow are those observed during the Wei, A D 220-264, and the Tsin, 265-419. These are succeeded by the comets observed during the Sung, Tso, Leang, Chin, and Say dynasties, embracing the period between A D 420 and 617, when the Tang dynasty obtained the superiority.

WEI, A MINOR STATE, A D 220-264

88 A D 222 November 4

In the reign of Wan Te, the 31d year of the epoch Hwang Choo, the 9th moon, day Koa Shin, a strange star was seen in Tso Wei, to the left, within Yih Mun

Wan Te, A D 220-226, epoch, Hwang Choo, 220-226 31d year, 222, 9th moon, day Koa Shin, November 4th

Tso Wei, space bounded by stars in Leo and Virgo

Yih Mun, space between α and β Virginis

She Ke

89 A D 225 December 9

In the 6th year of the same epoch, the 10th moon, on the day Yih Wei, there was a comet in Shaou Wei. It passed through Hoen Yuen

Epoch Hwang Choo, 6th year, A D 225 10th moon, day Yih Wei, Dec 9

Shaou Wei, same as Tso Wei, space between stars in Leo and Virgo

Hoen Yuen, α and others in Leo and Leo Minor

M T L

90 A D 232 December 4

In the reign of Ming Te, the 6th year of the epoch Tso Ho, the 11th moon, day Ping Yin, there was a comet in S D Yih, near the star Shang Tsoang in Tso Wei

Ming Te, A D 227-239, epoch Tso Ho, 227-232 6th year, 232, 11th moon, day Ping Yin, December 4th

S D Yih determined by α and others in Crater

Tso Wei, space between stars in Leo and Virgo

Shang Tsoang, γ Virginis

She Ke, M T L

91 A D 236 November 30

In the 4th year of the epoch Tsang Lung, the 10th moon, on the day Koa Shin, there was a comet in Ta Shin. It was 3 cubits in length. On the day Yih Yew the comet was in the east. In the 11th moon, day Yih Hae, the comet was seen passing near the stars Hwan Ohay and Toon Ko

Epoch Tsang Lung, A D 233-236 4th year, 236, 10th moon, day Koa Shin, November 30th, days Yih Yew, December 1st, Yih Hae, 237, January 20th

Ta Shin. The Commentary intimates that Ta Shin is the same as Teen Wang—Polaris

Hwan Ohay, small stars in head of Ophiuchus

She Ke, M T L

Teen Ke, small stars near θ Hercules

The 'She Ke' has Ko Hae for Yih Hae, which would be 236, December 15

This appears to be the same comet as No 87

92

A D 238 *September*

In the 2nd year of the epoch King Ohoo, the 8th moon, a comet was seen in S D Ohang. It was 3 cubits in length. It went backwards towards the west. On the 41st day it disappeared.

Epoch King Ohoo, A D 237-239 2nd year, 238, 8th moon, September

S D Ohang determined by κ , λ , μ , &c Hydrie

Sho Ke, M T L

93

A D 238 *November 29*

In the 10th moon of the same year, on the day Kwei Sze, a strange star was seen in S D Wei. It went the contrary way. Its place was to the north of Lo Kung, and to the south of Tung Shay. On the day Koa Shin it was near the star Tsung, on the day Ko Yow it disappeared.

King Ohoo, and year, A D 238 10th moon, days, Kwei Sze, November 29th
Koa Shin, December 10th, Ko Yow, December 15th

S D Wei determined by α Aquarii and θ , ϵ Pegasi

Lo Kung, three groups of two stars, each in Pegasus, with α and β Pegasus they form S D Shih

Tung Shay, stars in Cygnus, Lacerta, and Andromeda

Tsung Ting, small stars in head of Taurus Poniatowski

Sho Ke

94

A D 240 *November 5*

In the reign of Fui To, in the 1st year of the epoch Ohing Oho, day Yih Yow, a comet was seen in the west. Its place was in S D Wei. It was 20 cubits in length. It passed through S D Now, near to Tao Pih. In the 11th moon, day Koa Tsao, it entered Yu Lan.

Emperor Fui To, A D 240-253, epoch Ohing Oho, 240-248, 1st year, A D 240, 10th moon, day Yih Yow, Nov 5th, 11th moon, day Koa Tsao, Dec 14th

S D Wei determined by ϵ , μ , ν , &c in Scorpion

S D Now determined by ζ , τ , ϵ , &c in Sagittarius

Tao Pih, the planet Venus

Yu Lan, δ , τ , γ , and others in Aquarius and Pisces

Sho Ke, M T L

95

A D 245 *September 18*

In the 6th year of the same epoch, the 8th moon, day Woo Woo, a comet was seen among the seven stars of S D Sing. It was 2 cubits in length. Its colour was white. It passed into the S D Ohang. After 23 days it disappeared.

Ohing Oho, 6th year, A D 245 8th moon, day Woo Woo, September 18th

S D Sing determined by the seven stars in α Hydrie and others near

S D Ohang determined by κ , λ , μ , &c in Hydrie

Sho Ke, M T L

96

A D 247 January 16

In the 7th year of the same epoch, the 11th moon, on the day Kwei Hae, a comet was seen in S D Chin. It was 1 cubit in length. It was visible for 156 days, and then disappeared.

Ching Che, 7th year, A D 246 11th moon, day Kwei Hae, 247, Jan 16th
S D Chin determined by β and others in Corvus *She Ke, M T L*

'M T L' has 56 instead of 156 days, during which the comet was seen, in which he is followed by Biot, and which appears to be the more probable number. The 'She Ke' is as above.

97

A D 248 April

In the 9th year of the same epoch, the 31d moon, there was (a comet) seen in S D Maou. It was 6 cubits in length. Its colour was a bluish white. The tail pointed to the south-west. In the 7th moon it was seen in S D Yih, and was 2 cubits in length. It passed into S D Chin after 42 days it disappeared.

Ching Che, 9th year, A D 248 31d moon, April, 7th moon, August
S D Maou determined by the Pleiades
Yih determined by α , &c. Chetuis
Chin determined by β , &c. Corvi *She Ke, M T L*

98

A D 251 December 21

In the 31d year of the epoch Kea Ping, the 11th moon, day Kwei Hae, there was a comet in Ying Shih. It went to the west, and was visible for 90 days, when it disappeared.

Epoch Kea Ping, A D 249-253 31d year, 251, 11th moon, day Kwei Hae, December 21st

S D Ying Shih, same as Shih, determined by α , β Pegasi, &c. *She Ke, M T L*

99

A D 252 March 25

In the 4th year of the same epoch, the 2nd moon, day Ting Yow, a comet was seen in the west. Its place was in S D Wei. It was from 50 to 60 cubits in length. Its colour white. The tail pointed to the south, passing through S D Tuen. It was visible for 20 days, and then disappeared.

Epoch Kea Ping, 4th year, 252 2nd moon, day Ting Yow, March 25th
S D Wei determined by the three stars in Musca.
S D Tuen determined by α , β , &c. Orionis *She Ke, M T L*

100

A D 253 December

In the 5th year of the same epoch, the 11th moon, a comet was seen in S D Chin. It was 50 cubits in length. Its place was in Tao Wei, to the left of Tao Cho Fa. It pointed towards the south east. It was visible for 190 days, when it disappeared.

Kea Ping, 253 5th year, 11th moon, December
 S D Chin determined by β , &c Corvi
 Tao Wei, space between stars in Leo and Virgo
 Tso Cho Fu, η Virginis

Sho Ke, M T L

101 A D 255 *February*

In the reign of Shaou To, the 2nd year of the epoch Ching Yuen, the 1st moon, there was a comet in Woo Yue, to the north-west, in the horizon

Emperor Shaou To, A D 254-259, epoch Ching Yuen, 254-255 2nd year, 1st moon, 255, February
 Woo Yue, ϵ , ζ Aquilo

Sho Ke, M T L

102 A D 257 *December*

In the 2nd year of the epoch Kan Loo, the 11th moon, a comet was seen in S D Koo Its colour was white

Epoch Kan Loo, A D 256-259 2nd year, 11th moon, December
 S D Koo determined by α and another in Virgo

Sho Ke, M T L

103 A D 259 *November 23*

In the 4th year of the same epoch, 10th moon, day Ting Chow, a strange star was seen in the middle of Tao Wei It turned and went to the south-east It passed through S D Chin It was altogether visible for 7 days, and then disappeared

Kan Loo, 4th year, A D 259 10th moon, day Ting Chow, November 23rd
 Tao Wei, space in Leo and Virgo
 S D Chin determined by β and others in Corvus

Sho Ke

104 A D 262 *December 2*

In the reign of Yuen To, the 3rd year of the epoch King Yuen, 11th moon, day Jin Yin, a comet was seen in S D Kang Its colour was white It was $\frac{7}{10}$ th of a cubit in length It went to the north After 45 days it disappeared

Emperor Yuen To, A D 260-265, epoch King Yuen, 260-263 3rd year, 262, 11th moon, day Jin Yin, December 2nd
 S D Kang determined by ϵ , κ , λ , θ Virginis

Sho Ke, M T L

105 A D 265 *June*

In the 2nd year of the epoch Han Ho, the 5th moon, a comet was seen in Wang Loang Its length was about 10 cubits Its colour was white It pointed towards the south east After 12 days it disappeared

Epoch Han Ho, A D 264-265 2nd year, 5th moon, 265, June
 Wang Loang, α , β , η , κ Cassiopeia

Sho Ke, M T L

The Wei having obtained the superiority adopted the name of Tsin, and founded the

TSIN DYNASTY, A D 265-419

106

A D 268 *February 18*

In the reign of the Emperor Woo To, the 4th year of the epoch Tao Oho, the 1st moon, day Ping Seuh, a comet was seen in S D Chin. Its colour was a bluish white. It went to the north-west, but afterwards turned and went to the east.

Emperor Woo To, A D 265-289, epoch Tao Oho, 265-274 4th year, 268, 1st moon, day Ping Seuh, February 18th

S D Chin determined by β and others in Corvus

She Ke, M T L

107

A D 275 *January*

In the 10th year of the same epoch, the 12th moon, there was a comet in S D Chin.

Epoch Tao Oho, 10th year, 274 12th moon, 275, January

S D Chin determined by β and others in Corvus

108

A D 276 *June 24*

In the 2nd year of the epoch Han Ning, the 6th moon, on the day Koa Souh, there was a comet in S D Te. In the 7th moon the comet was near Ta Koo. In the 8th moon the comet was in Tao Wei. It passed into S D Yih, and also into Pih Tow and San Tao.

Epoch Han Ning, A D 275-279 2nd year, 276, 6th moon, day Koa Souh, June 24, 7th moon, July, 8th moon, August

S D Te determined by α , β , γ , &c. Labiae

S D Yih determined by α and others in Oriator

Ta Koo, Arcturus Pih Tow, the seven bright stars in Ursa Major

San Tao, the stars in the foot of Ursa Major

She Ke, M T L

In the original this account is divided into three parts, separated by astronomical inferences. There is no doubt but that they relate to one comet. The S D also are here considered as extending to the Polo. The same remarks apply to the next two comets.

109

A D 277 *February*

In the 3rd year of the same epoch, the 1st moon, there was a comet in the west. In the 3rd moon it was in S D Wei. In the 4th moon the comet was in Nou Yu. In the 5th moon it was in the east. In the 7th moon it was in Tse Kung.

Epoch Han Ning, 3rd year, A D 277 1st moon, February, 3rd moon, April, 4th moon, May, 5th moon, June, 7th moon, August

S D Wei determined by the three stars in Musca

Nou Yu, π Leonis

Tse Kung, circle of perpetual apparition

She Ke, M T L

110

A D 279 *April*

In the 5th year of the same epoch, the 3d moon, there was a comet in S D Low
In the 4th moon the comet was in Now Yu In the 7th moon the comet was in Tse
Kung

Han Ning, 5th year, A D 279 3d moon, April, 4th moon, May, 7th moon,
August

S D Low determined by δ , ϵ , &c Hydus Now Yu, π Leonis

Tse Kung, circle of perpetual apparition

She Ke, M T L

There is evidently here some confusion in the original text, as the observations
of the 4th and 7th moons are precisely the same as the observations of the pre-
ceding comet in the 4th and 7th moons of its appearance It is, however, the same
both in the 'She Ke' and 'M T L'

111

A D 281 *September*

In the 2nd year of the epoch Tse Kung, the 8th moon, there was a comet in
S D Chang

Epoch Tse Kung, A D 280-289 2nd year, 281, 8th moon, September

S D Chang determined by κ , λ , μ , &c Hydus

She Ke, M T L

112

A D 281 *December*

In the 11th moon of the same year there was a comet in Hsen Yuen

A D 281, 11th moon, December

Hsen Yuen, α and other stars in Leo and Leo Minor

She Ke, M T L

113

A D 283 *April 22*

In the 4th year of the same epoch, the 3d moon, day Woo Shin, there was a comet
in the south west

Tse Kung, 4th year, A D 283 3d moon, day Woo Shin, April 22

She Ke, M T L

114

A D 287 *September*

In the 8th year of the same epoch, the 9th moon, there was a comet in Nan Tow
Its length was reckoned at 100 cubits In about 10 days it disappeared

Tse Kung, 8th year, A D 287 9th moon, September

Nan Tow, same as S D Tow, determined by ζ , τ , σ , &c Sagittarii

She Ke, M T L

115

A D 290 *May*

In the 1st year of the epoch Tao Ho, the 4th moon, there was a strange star in Tse Kung

Epoch Tao Ho, A D 290 In the Tables this epoch is written Yung Ho, and is made the 1st of the Emperor Hwuy To 4th moon, May

Tse Kung, circle of perpetual apparition

She Ke, M T L

116

A D 296 *May*

In the reign of Hwuy To, the 5th year of the epoch Yuen Kang, the 4th moon, there was a comet in S D Kwei It passed into Heen Yuen and Tao Wei It crossed San Tse and Tu Lang

Emperor Hwuy To, A D 290-306, epoch Yuen Kang, 291-299 5th year, 296 4th moon, May

S D Kwei determined by β , δ , ϵ , &c Andromeda and stars in Pisces

Heen Yuen, α and others in Leo and Leo Minor

Tao Wei, space between stars in Leo and Virgo

San Tse, stars in foot of Ursa Major Tu Lang, γ and others in Perseus

She Ke, M T L

117

A D 300 *April*

In the 1st year of the epoch Yung Kang, 3rd moon, a strange star was seen in the south

Epoch Yung Kang, A D 300 3rd moon, April

She Ke

Possibly a meteor

118

A D 301 *January*

In the 12th moon of the same year a comet appeared in S D New, to the west It pointed to Tien She

A D 300, 12th moon, 301, January

S D New determined by α , β , &c Capricorn

She Ke, M T L

119

A D 301 *May*

In the 2nd year of the same epoch, 4th moon, a comet was seen near the star Tao

Yung Kang, 2nd year, 301 4th moon, May

Star Tao, Π Hercules

She Ke, M T L

120

A D 302 *May*

In the 1st year of the epoch Tao Gan, the 4th moon, a comet was seen in the dayams

Tao Gan, 302-303, 1st year, 4th moon, 302, May

She Ke, M T L

121 A D 303 April

In the 2nd year of the same epoch, the 31d moon, a comet was seen in the east. It pointed towards San Tuo.

The Gan, 2nd year, A D 303 31d moon, April

San Tuo, the stars in foot of Ursa Major

She Ke, M T L

122 A D 304 May

In the 1st year of the epoch Yung Hing, the 5th moon, there was a strange star in S D Poh.

Epoch Yung Hing, A D 304-305 1st year, 304 5th moon, May

S D Poh determined by α , γ , δ , & ϵ Tauri

She Ke

123 A D 305 September

In the 2nd year of the same epoch, the 8th moon, there was a comet in S D Maou and Poh.

Yung Hing, 2nd year, 8th moon, A D 305, September

S D Maou determined by the Pleiades

S D Poh determined by α , γ , δ , ϵ , & ζ Tauri

She Ke, M T L

124 A D 305 November 21

In the 10th moon of the same year, on the day Tung Chow, there was a comet in Pih Tow, near the star Souen Ko.

A D 305, 10th moon, day Tung Chow, November 21st

Pih Tow, the seven bright stars in Ursa Major

Souen Ko, same as Toon Ko, γ Ursa Majoris

She Ke, M T L

125 A D 329 August

In the reign of Ohing To, the 4th year of the epoch Han Ho, the 7th moon, there was a comet in the north west. It entered into S D Tow. After 23 days it disappeared.

Emperor Ohing To, A D 326-342, epoch Han Ho, 326-334 4th year, 329

7th moon, August

S D Tow determined by ζ , τ , σ , ϕ , & ϵ Sagittarii

She Ke, M T L

126 A D 336 February 16

In the 2nd year of the epoch Han Kang, 1st moon, day Sun Sze, a comet was seen in the evening, in the west. Its place was in S D Kwei.

Epoch Han Kang, A D 335-342 2nd year, 336 1st moon, day Sun Sze, Feb 16

S D Kwei determined by β , δ , ϵ , & ζ Andromedæ and others in Pisces

She Ke, M T L

'M T L' has the 2nd moon, March, but no day Sun Sze occurs in March in that year.

127

A D 340 *March 5*

In the 2nd moon of the 6th year of the same epoch, day Kang Shin, there was a comet in Tse Wei

Epoch Han Kang, 6th year, 340 2nd moon, day Kang Shin, March 5th
Tse Wei, space between stars in Leo and Virgo *See Ac, M T L*

128

A D 343 *December 8*

In the reign of the Emperor Kang Te, the 1st year of the epoch Koon Yuen, the 11th moon, 6th day, a comet was seen in S D Kang Its length was 7 cubits Its colour was white

Emperor Kang Te and epoch Koon Yuen, A D 343-344 1st year, 313 11th moon, 6th day, December 8th
S D Kang determined by $\epsilon, \kappa, \lambda, \theta$ Virginis *See Ac, M T L*

129

A D 349 *November 23*

In the reign of Muh Te, the 5th year of the epoch Yung Ho, the 11th moon, day Yih Maou, a comet was seen in S D Kang It was bright, and directed towards the west Its colour was white It was 10 cubits in length In the 1st moon of the 6th year, on the day Ting Ohow, the comet was still visible in S D Kang

Emperor Muh Te, A D 345-361, epoch Yung Ho, 345-356 5th year, 349, 11th moon, day Yih Maou, 349, November 23rd, 6th year, 350 1st moon, day Ting Ohow, February 13th
S D Kang determined by $\epsilon, \kappa, \lambda, \theta$ Virginis *See Ac, M T L*

130

A D 358 *July 1*

In the 2nd year of the epoch Shing Ping, the 5th moon, day Ting Hae, a comet was seen in Teen Ohuen, in S D Wei

Epoch Shing Ping, A D 357-361 2nd year, 358 5th moon, day Ting Hae, July 1
Teen Ohuen, γ, η Persei
S D Wei determined by the three stars in Musca *See Ac, M T L*

131

A D 363 *August*

In the reign of Gao Te, the 1st year of the epoch Hing Ning, the 8th moon, there was a comet in S D Koo and Kang It entered the boundary of Teen She

Emperor Gao Te, A D 362-365, epoch Hing Ning, 363-365 1st year, 363 8th moon, August
S D Koo determined by α Virginis and another.
S D Kang determined by $\epsilon, \kappa, \lambda, \theta$ Virginis
Teen She, space bounded by Serpens *See Ac, M T L*

132

A D 369 *March*

In the reign of Te Yih, the 4th year of the epoch Tse Ho, the 2nd moon, a strange star was seen in Tse Kung, near its western boundary. In the 7th moon it disappeared.

Emperor Te Yih and epoch Tse Ho, A D 366-370 4th year, 369 2nd moon, March

Tse Kung, circle of perpetual apparition

She Ke

133

A D 373 *March 9*

In the reign of the Emperor Hsiao Woo, the 1st year of the epoch Ning Kang, the 1st moon, day Ting Sze, there was a comet in S D Neu, Hen, Te, Kang, Keo, Ohn, Yih, and Chang. In the 2nd moon, day Ping Seuh, the comet was seen in S D Te. In the 9th moon, day Tung Chow, the comet was in Teen She.

Emperor Hsiao Woo, A D 373-396, epoch Ning Kang, 373-375 1st year, 373, 1st moon, day Ting Sze, March 9th, 2nd moon, day Ping Seuh, April 7th, 9th moon, day Tung Chow, September 25th

S D Neu determined by ϵ , μ , & δ Aquarii

Hou determined by β Aquarii and others

Te determined by α , β , & δ Librae

Keo determined by α and ξ Virginis

Kang determined by ι , κ , λ , θ Virginis

Ohn determined by β , & δ Corvi

Yih determined by α and others in Crater

Ohung determined by κ , λ , μ Hydriæ

Teen She, the space bounded by Scorpæ

M T L

The 'She Ke' has this comet under the 2nd year, 1st and 3rd moons. This would make it A D 374, February and March.

134

A D 386 *April*

In the 11th year of the epoch Tao Yuen, the 3rd moon, there was a comet in Nan Tow. It was visible until the 6th moon, when it disappeared.

Epoch Tao Yuen, A D 376-396 11th year, 386, 3rd moon, April 6th moon, July

Nan Tow, same as S D Tow, determined by λ , μ , ϕ , σ , & δ Sagittarii

She Ke

135

A D 390 *August 22*

In the 15th year of the same epoch, the 7th moon, day Jin Shun, there was a comet in Pih Ho. It crossed Tao Wei, San Tse, and Wan Chung. It entered Pih Tow. Its colour was white. It was about 100 cubits in length. In the 8th moon, on the day Woo Seuh, it entered Tse Wai and disappeared.

Tae Yuen, 15th year, A D 390 7th moon, day Jin Shun, August 22nd, day
Woo Souh, September 17th

Pih Ho, α , β , & γ Geminae

Tae Wei, space between stars in Leo and Virgo

San Tao, stars in foot of Ursa Major

Wan Chang, θ , ν , & ϕ Ursa Majoris

Pih Tow, the seven bright stars in Ursa Major

Tae Wei, circle of perpetual apparition

She Ke, M T L

136

A D 393 March

In the 18th year of the same epoch, the 2nd moon, a strange star appeared in the
middle of S D Sing In the 9th moon it disappeared

Tae Yuen, 18th year, A D 393 2nd moon, March, 9th moon, October

S D Sing determined by α , τ , & Hydus

She Ke

137

A D 400 March 19

In the reign of Gan To, the 4th year of the epoch Lung Gan, the 2nd moon, day
Ke Chow, there was a comet in S D Kwei It was more than 30 cubits in length It
was above Ko Tuon, in the western part of Tse Kung It entered Pih Tow Kwei
It passed on to San Tae In the 3rd moon it entered Tao Wei, To Tao, and Twan
Mun

Emperor Gan To, A D 397-418, epoch Lung Gan, 397-400 4th year, 400
2nd moon, day Ke Chow, March 19, 3rd moon, April

S D Kwei determined by β , δ , & Andromeda and stars in Pisces

Ko Tuon, δ , ϵ , and others in Cassiopeia

Tse Kung, circle of perpetual apparition

Pih Tow, the seven bright stars in Ursa Major

San Tao, stars in the foot of Ursa Major

Tao Wei, space between stars in Leo and Virgo

To Tao, α Woo Te Tao, β Leonis and stars near

Twan Mun, possibly Teon Mun, between β and η Virginis *She Ke, M T L*

138

A D. 401 January 2

In the 12th moon of the same year, on the day Woo Yin, there was a comet in
Shih Soo, Teen She, and Toon Tan

A D 400 12th moon, day Woo Yin, 401, January 2nd

Shih Soo, Corona Borealis

Teen She, space bounded by Scorpions

Toon Tan, α , β , ϵ , & Cygni

139

A D 402 November 12

In the 1st year of the epoch Yuen Hing, the 10th moon, a strange star appeared. Its colour was white. It resembled a handful of meal. Its place was to the west of Tao Wei. In the 12th moon it entered Tao Wei.

Epoch Yuen Hing, A D 402-404, 1st year, 402 10th moon, November, 12th moon, January, 403

Tao Wei, space between stars in Leo and Virgo

She Ke

140

A D 415 June 24

In the 11th year of the epoch E He, the 5th moon, day Koa Shin, two comets appeared in Teen She. They swept Te Tso. They were in the north of S D Fang and Sin.

Epoch E He, A D 405-418 11th year, 415 5th moon, day Koa Shin, June 24

S D Fang determined by β , δ , Δ in Scorpio

Sin determined by α , σ , τ in Scorpio

Teen She, space bounded by Scorpions

Te Tso, α Hercules

She Ke, M T L

141

A D 418 September 15

In the 14th year of the same epoch, 5th moon, day Kung Tso, there was a comet in Pih Tow Kwai, towards the middle. In the 7th moon, day Kwei Hiao, the comet appeared in the western part of Tao Wei, above Juy Ke, and below the star Leang. It was bright, and gradually lengthened until it was about 100 cubits in length. In its course it swept Pih Tow, Tso Wei, and Chung Tse.

E He, 14th year, A D 418 7th moon, day Kwei Hiao, September 15th

Tao Wei, space between stars in Leo and Virgo

Juy Ke unascertained

Leang Several stars having this name occur in Tao Wei. One of these, to the west, is possibly that here referred to.

Pih Tow, the seven bright stars in Ursa Major. Kwei in Pih Tow is referred to the square in the same.

Chung Tse, λ , μ Ursa Majoris

Tso Wei, circle of perpetual apparition

She Ke, M T L

142

A D 419 February 7

In the reign of Kung To, the 1st year, 1st moon, day Woo Souh, there was a comet in the western boundary of Tao Wei.

Emperor Kung To and 1st year, 419 1st moon, day Woo Souh, Feb 17

Tao Wei, space between stars in Leo and Virgo

She Ke, M T L

Kung To was the last Emperor of the Tan dynasty. He reigned but one year, and was succeeded by the Sung.

THE EARLY SUNG DYNASTY, A D 420-478

143 A D 422 March 21

In the reign of Woo Te, the 31d year of the epoch Yung Choo, the 2nd moon, day Ping Shuh, a comet was seen in S D Hou and Wei

Emperor Woo Te and epoch Yung Choo, A D 420-422 31d year, 422

S D Hou determined by β Aquarii and another

S D Wei determined by α Aquarii and θ , ϵ Pegasi

144 A D 422 December 17

In the 11th moon of the same year, on the day Woo Woo, there was a comet in Ying Shuh

422, 11th moon, day Woo Woo, December 17th

Yung Shuh, same as S D Shuh, determined by α and others in Pegasus

145 A D 423 February 13

In the reign of Shao Te, the 1st year of the epoch King Ping, the 1st moon, day Yih Maou, there was a comet in the eastern part of S D Peih

Emperor Shao Te and epoch King Ping, A D 423 1st moon, day Yih Maou, February 13th

S D Peih determined by γ Pegasi and α Andromedae *See Ac, M T L*

146 A D 423 October 15

In the 10th moon of the same year, on the day Ko Wei, there was a comet in S D Te

423, 10th moon, day Ko Wei, October 15th

S D Te determined by α , β , γ , ν Librae *See Ac, M T L*

147 A D 442 November 1

In the reign of Wan Te, the 19th year of the epoch Yuen Koa, the 9th moon, day Ping Shin, there was a strange star in Pih Tow. It became a comet, and entered Wan Ohang, Kwan and Woo Ohay. It swept S D Peih. It passed near Toon Tso. It crossed Teen Yuen. In the winter it disappeared.

Emperor Wan Te and epoch Yuen Koa, A D 424-453 19th year, A D 442 9th moon, day Ping Shin, November 1st

S D Peih determined by α , γ , δ and others in Taurus

Pih Tow, the seven bright stars in Ursa Major

Kwan or Shih, Corona Borealis Wan Ohang, θ , ϕ , ν Ursa Majoris

Woo Ohay, α , β , θ , ι Aurigae and β Tauri

Toon Tso, π , ρ and others in Taurus, near the Hyades

Toon Yuen, γ , δ , ϵ and others in Eridanus

See Ac, M T L

148 A D 449 November 11

In the 26th year of the same epoch, 10th moon, day Kwei Maou, a comet was seen in Tae Wei

Yuen Kae, 26th year, 449 10th moon, day Kwei Maou, November 11th
Tae Wei, space between stars in Leo and Virgo *She Ke, M T L*

149 A D 451. May 17

In the 28th year of the same epoch, the 4th moon, day Yih Maou, a comet was seen in S D Maou In the 6th moon, day Jin Tiao, it was seen in the middle of Tae Wei, over against Te Tao

Yuen Kae, 28th year, A D 451 4th moon, day Yih Maou, May 17th 6th moon, day Jin Tiao, July 13th

S D Maou determined by the Pleiades

Tae Wei, space between stars in Leo and Virgo

Te Tao, β Leonis and small stars near

She Ke, M T L

The 'She Ke' has the day Ke Maou, June 10th

TAN DYNASTY, A D 479-501

150 A D 501 February 13

In the reign of Tung Hwan Hlow, in the 31d year of the epoch Yung Yuen, 1st moon, day Yih Sze, a tailed star was seen in the horizon

Emperor Tung Hwan Hlow and epoch Yung Yuen, 499-500 31d year, 501 1st moon, day Yih Sze, February 13th

In the Tables, 501 is in the next epoch, Chung Hing

151 A D 501 April 14

In the reign of Ho Te, the 1st year of the epoch Chung Hing, 31d moon, day Yih Sze, there was a comet in the horizon

Ho Te and epoch Chung Hing, A D 501 31d moon, day Yih Sze, April 14th

This and the preceding are possibly the same comet they are both from 'M T L'

LIANG DYNASTY, A D 502-556

152 A D 532 January 6 (?)

In the reign of Woo Te, the 5th year of the epoch Chung Ta Tung, 1st moon, day Ke Yew, a tailed star was seen

Emperor Woo Te, A D 502-549, epoch Chung Ta Tung, 528-534 5th year, 532, 1st moon, day Ke Yew, January 16th This date is doubtful

153

A D 539 *November 17*

In the 5th year of the epoch Ta Tung, 10th moon, day Sin Chow, a comet appeared in Nan Tow. It was about one cubit in length, pointing to the south east. It gradually increased to about 10 cubits in length. In the 11th moon, day Yih Maou, it entered S D Lew and disappeared.

Epoch Ta Tung, 535-545, 5th year, 539 10th moon, day Sin Chow, November 17th, 11th moon, day Yih Maou, December 1st

S D Nan Tow, or Tow, determined by ζ , τ , σ , &c Sagittarii

S D Lew determined by α , β , γ Arietis

Sha Ka, M T L

CHIN DYNASTY, A D 557-588

154

A D 560 *October 4*

In the reign of Wan To, the 1st year of the epoch Teon Koa, the 9th moon, on the day Kwai Chow, a comet was seen. It was 4 cubits in length. The tail pointed to the south west.

Emperor Wan To, A D 560-566, epoch Teon Koa, 560-565, 1st year, 560 9th moon, day Kwai Chow, October 4th

Sha Ka, M T L

155

A D 565 *July 23*

In the 6th year of the same epoch, the 6th moon, day Sin Yow, there was a comet about 10 cubits in length. It was seen in Shang Tao.

Teon Koa, 6th year, A D 565 6th moon, day Sin Yow, July 23rd

Shang Tao, & A Ursa Majoris

Sha Ka, M T L

156

A D 568 *August 3*

In the reign of Poi To, the 2nd year of the epoch Kwang Ta, the 6th moon, day Ting Hae, a comet was seen.

Emperor Poi To, A D 567-568, epoch Kwang Ta, the same, 2nd year, 568 6th moon, day Ting Hae, August 3rd

M T L

157

A D 575 *April 27*

In the reign of Souan To, in the 7th year of the epoch Ta Koon, 4th moon, day Ping Souh, there was a comet near Ta Koo.

Emperor Souan To, A D 569-582, epoch Ta Koon the same, 7th year, 575 4th moon, day Ping Souh, April 27th

Ta Koo, Aieturus

158

A D 416 January 26

In the 12th year of the same epoch, the 12th moon, day Sin Sze, a comet was seen in the south west

Ta Koen, 12th year, 580 12th moon, day Sin Sze, January 26th

Sho Ke, M T L

HOW WEI, A MINOR DYNASTY, A D 386-534

159

A D 416 June 27

In the reign of Ming Yuan Te, in the 1st year of the epoch Tao Chang, 5th moon, day Koa Shin, two comets were seen

Ming Yuan Te, A D 409-423, epoch Tao Chang, 416-423, 1st year, 416
5th moon, day Koa Shin, June 27th M T L

PIU TSE, A MINOR DYNASTY, A D 570-577

160

A D 565 (?) April 21

In the reign of Woo Chung Te, the 4th year of the epoch Ho Tung, 31d moon, a comet was seen

Emperor Woo Chung Te, A D 561-564, epoch Ho Tung, 562-564, 4th year,
565 (?) 31d moon, April *Sho Ke, M T L*

The 'Sho Ke' adds the day, Woo Tse, April 21

The Tables gave but 3 years to this epoch the date is consequently doubtful

161

A D 565 July 24

In the reign of How Choo, the 1st year of the epoch Teon Tung, the 6th moon, day Jin Souh, a comet was seen in Wan Chang. Its length was reckoned at $\frac{1}{10}$ th of a cubit. It entered Wan Chang. It passed over Shang Tsoang, and afterwards crossed Tse Wei Kung to its western boundary. It gradually lengthened to about 10 cubits. It pointed to S D Shih and Peh. After about 100 days it entered S D Hou and Wai, and then disappeared.

Emperor How Choo, A D 565-576, epoch Teon Tung, 565-569, 1st year,
565 6th moon, day Jin Souh, July 24th

S D Wei determined by α Aquarii and θ , ϵ Pegasi

Shih determined by α Pegasi and other stars

Peh determined by γ Pegasi and α Andromedae

Hou determined by β Aquarii and others

Wan Chang, θ , ν , ϕ , &c Ursa Majoris

Shang Tsoang, stars in Coma Berenices

Tse Wei Kung, circle of perpetual apparition

Sho Ke, M T L

162

A D 568 July

In the 4th year of the same epoch, the 6th moon, a comet was seen in S D Tang

Toan Tung, 4th year, A D 568 6th moon, July

S D Tang, γ , ϵ , λ , μ , &c Geminaum

She Ke, M T L

163

A D 568 August

In the 7th moon of the same year a comet was seen in S D Fang and Sin It was white like meal, or the refuse of silk, and was as large as a tow measure It went to the east In the 8th moon it entered Toon Sho It gradually increased in length to 40 cubits In shape it resembled a melon It passed through S D Hien and Wei It entered S D Shih It passed over the Lo Kung In the 9th moon it entered S D Kwei It passed on to S D Low, and then disappeared

Toan Tung, 4th year 7th moon, 568, August, 8th moon, September, 9th moon, October

S D Fang determined by β , δ , π , ρ in Scorpio

Sin determined by α , σ , τ in Scorpio

Hien determined by β Aquarii and another

Wei determined by α Aquarii and θ , ϵ Pegasi

Shih determined by α , β Pegasi and others near

Kwei determined by β , δ , ϵ Andromedæ and stars in Pisces

Low determined by α , β , γ Arietis, &c

Toan She, space bounded by Scorpis

Lo Kung, three groups of two stars each in Pegasus they are λ , μ , η , ϕ , ν , τ ,
and form part of S D Shih

She Ke, M T L

HOW OPOW, A MINOR DYNASTY, A D 557 581

164

A D 561 September 26

In the reign of Woo To, the 1st year of the epoch Paou Ting, the 9th moon, day Yih Sze, an extraordinary star was seen in S D Yih

Emperor Woo To, 561-578, epoch Paou Ting, 561-565, 1st year, 561 9th moon, day Yih Sze, September 26th

S D Yih determined by α and others in Chetoi

She Ke

165

A D 565 July 22

In the 5th year of the same epoch, the 6th moon, day Kang Shun, a comet appeared in Sen Tse It entered Wan Chang and Shang Tsoang It afterwards crossed the western boundary of Tere Kung It entered S D Wei, and gradually increased to about 10 cubits in length It pointed towards S D Shih and Peih After about 100 days it gradually diminished to about 2½ cubits in length It arrived at S D Hien and Wei, and then disappeared

Pao Ting, 5th year, A D 565 6th moon, day Kang Shin, July 22

S D Wei determined by α Aquarii and θ , ϵ Pegasi

Shih determined by α , β Pegasi and stars near

Poih determined by α Tauri and others near

Hou determined by β Pegasi and another

San Tao, feet of Ursa Major

Wan Chang, θ , ν , ϕ , &c Ursa Majoris

Shang Tsung, ν , &c in Coma Berenices

Tsao Kung, circle of perpetual apparition

M T L

This appears to be the same as No 161 by a different observer, and on another day

166

A D 568 July 21

In the 31d year of the epoch Toon Ho, 6th moon, day Kea Souh, a comet was seen in the eastern part of S D Tsang. It was 10 cubits in length. Its colour was white in the upper part and reddish below. It ended in a point. It gradually went to the east. In the 7th moon, day Kwei Maou, it passed to the north of S D Kwei. It was then $\frac{1}{10}$ ths of a cubit in length. It afterwards disappeared.

Epoch Toon Ho, A D 566-571, 31d year, 568 6th moon, day Kea Souh, July 21st, 7th moon, day Kwei Maou, August 19th

S D Tsang determined by γ , δ , λ , μ , &c Geminorum

S D Kwei determined by γ , δ , η , θ Ursa

Sho Ka, M T L

167

A D 574 April 4

In the 31d year of the epoch Koon Tih, the 2nd moon, day Woo Woo, a strange star, resembling a large peach, of a bluish-white colour, appeared in Woo Ohny, to the south-east. It was 3 cubits in length. It went slowly to the east, and whilst there increased to 2 cubits in length. In the 4th moon, day Jin Shin, it entered Wan Chang. On the day Ting Wei it entered Kwei in Pih Tow, to about the middle. It afterwards left Kwei, and gradually became smaller. It was visible altogether for 93 days.

Sho Ka

Epoch Koon Tih, A D 572-577, 31d year, 574 2nd moon, day Woo Woo, April 4th, 4th moon, day Jin Shin, May 8th, Ting Wei, May 23d

Kwei in Pih Tow, the middle of the square in Ursa Major

Wan Chang, θ , ν , ϕ Ursa Majoris

168

A D 574 May 31

In the same year, the 4th moon, day Yih Maou, there was a comet just without the boundary of Tsao Kung. It was large, like a man's fist colour, reddish white. It pointed to Woo To Tso. It went slowly to the south-east. Its length was 15 cubits. In the 5th moon, day Kea Tso, it went to the north of Shang Tao and disappeared.

L

Keon Tih, 31d year, 574 4th moon, day Yih Maou, May 31st, 5th moon,
 day Kea Tso, June 9th
 Tse Kung, circle of perpetual apparition
 Woo To Tso, β Leonis and small stars near
 Shang Tse, ϵ , κ Ursa Majoris M T L
 In the 'Sho Ko' this is placed in the 10th moon

SUI DYNASTY, A D 589-617

169 A D 588 November 22

In the reign of the Emperor Wan To, the 8th year of the epoch Kao Hwang, the 10th moon, day Kea Tso, there was a comet in Keon Now

Wan To, one of the minor Princes, assumed the Imperial title, and thus became the founder of the Sui dynasty, A D 589, which was the 9th year of his epoch Kao Hwang, 581-600 consequently the 8th year was 588 His reign closed in 604

10th moon, day Kea Tso, November 22nd

Keon Now, same as S D Now, determined by α , β , &c Capricorn

She Kc, M T L

170 A D 594 November 10

In the 14th year of the same epoch, the 11th moon, day Kwei Wei, there was a comet in S D Hou and Wen It extended to S D Kwei and Leu

Kao Hwang, 14th year, 594 11th moon, day Kwei Wei, November 10th

S D Hou determined by β Aquarii and another

Wen determined by α Aquarii and θ , ϵ Pegasus

Kwei determined by β , δ , ϵ , &c Andromedæ and stars in Pegasus

Leu determined by α , β , γ Arietis

She Kc, M T L

171 A D 607 March 13

In the reign of Yang To, the 31d year of the epoch Tu Nao, 2nd moon, day Ke Chow, a comet was seen in the eastern part of S D Tsing and Wan Chung It passed through Ta Ling, Woo Ohay, and Pih Ho It entered Tso Wei and swept To Tso It passed on, and after about 100 days it disappeared

Emperor Yang To and epoch Tu Nao, A D 605-616, 31d year, 607 2nd moon, day Ke Chow, March 13th

S D Tsing determined by γ , ϵ , λ , μ Geminorum

Wan Chung, θ , ν , ϕ , &c Ursa Majoris Ta Ling, τ and others in Perseus

Woo Ohay, α , β , θ , χ Aurigæ and β Tauri Pih Ho, α , β , &c Geminorum

Tso Wei, space between stars in Leo and Virgo

To Tso, β Leonis and stars near

M T L

172

A D 607 April 4

In the 31d moon of the same year, day Sin Hae, a tailed star was seen in the horizon to the west. It passed through S D Kwei, Low, Koo, and Kang, and then was no longer seen. In the 9th moon, on the day Sin Wei, it returned, and was seen in the south. It was of a reddish colour, and was in the horizon in S D Koo and Kang, near their boundaries. It swept Tao Wei near To Tso. It entered most of the S D, but did not extend to Tsen and Tang. In the beginning of the next year it disappeared.

Ta Nao, 31d year, A D 607 31d moon, day Sin Hae, April 4th, 9th moon, day Sin Wei, October 21st

S D Kwei determined by α , δ , ϵ , &c Andromeda and stars in Psoes

Low determined by α , β , γ Arietis

Koo determined by α and ζ Virginis

Kang determined by ι , κ , λ , μ Virginis

Tsen determined by α , β , &c Orionis

Tang determined by γ , ϵ , μ , &c Geminorum

Tao Wei, space between stars in Leo and Virgo

To Tso, β Leonis and other stars near

Sho Ko, M T L

This may relate to two comets, as the account is not very clear.

173

A D 615 July

In the 11th year of the same epoch, the 6th moon, there was a comet in Wan Ohang, to the south east. Its length was from 5 to 6 tenths of a cubit. Its colour was dusky, and its extremity pointed. In the evening it had a waving motion. It went to the north-west. For several days it was in Wan Ohang. It went within 4 or 5 tenths of a cubit of Kung, but did not enter that space, and disappeared.

Ta Nao, 11th year, 615 6th moon, July

Wan Ohang, θ , ϕ , ν Ursa Majoris

Kung, or Tse Kung, circle of perpetual apparition

M T L

174

A D 616 July

In the 13th year of the same epoch, the 6th moon, there was a comet in Tae Wei, near Woo Te Tso. Its colour was a yellowish red. It was from 3 to 4 cubits in length. After several days it disappeared.

Ta Nao, 13th year, A D 616 6th moon, July

Tae Wei, space between stars in Leo and Virgo

Woo Te Tso, β Leonis and small stars near

M T L

175

A D 616 October

In the 9th moon of the same year a comet was seen in Yung Shih

616 9th moon, October

Yung Shih, same as S D Shih, determined by α Pognai and other stars near

M T L

TANG DYNASTY, A D 618-906

176

A D 626 *March 26*

In the reign of Kaou Tsao, the 9th year of the epoch Woo Tih, the 2nd moon, day Jin Woo, there was a comet in the S D Wei and Maou. On the day Ting Hiao the comet was in Kouen She.

Emperor Kaou Tsao, A D 618-626, epoch Woo Tih the same 9th year, 626 2nd moon, day Jin Woo, March 26th, Ting Hiao, March 31st

S D Wei determined by the three stars in Muxa

S D Maou, determined by the Pleiades.

Kouen She, ν Persei

She Ke, M T L

177

A D 634 *September 22*

In the reign of Tao Tsung, the 8th year of the epoch Ohing Kwan, the 8th moon, day Koa Tse, there was a comet in S D Hou and Wei. It passed through Houn Hcaou. On the day Yih Hiao it was no longer visible.

Emperor Tao Tsung and epoch Ohing Kwan, A D 627-649, 8th year, 634 8th moon, day Koa Tse, September 22nd, Yih Hiao, October 31st

S D Hou determined by β Aquarii and another

S D Wei determined by α Aquarii and θ , ϵ Pegasi

Houn Hcaou, one of the 12 kung, answering to our sign Aquarius, and comprising S D Hou, Wei, and Wei.

M T L

178

A D 639

In the 13th year of the same epoch, the 3rd moon, day Yih Chow, there was a comet in S D Pao and Maou.

13th year of Ohing Kwan, 639 3rd moon, day Yih Chow, April 30th

S D Pao determined by α , γ , δ , & ϵ Tauri

S D Maou determined by the Pleiades

She Ke, M T L

The 'She Ke' makes the year 638

179

A D. 641 *August 1*

In the 15th year of the same epoch, 6th moon, day Ko Yow, there was a comet in Tao Wei. It passed over Lang Wei. In the 7th moon, day Koa Seuh, it was no longer visible.

Ohing Kwan, 15th year, A D 641 6th moon, day Ko Yow, August 1st, 7th moon, day Koa Seuh, August 26th

Tao Wei, space between stars in Leo and Virgo

Lang Wei, Coma Berenices

She Ke, M T L

180

A D 663 September 29

In the reign of Kaou Tsung, the 31d year of the epoch Lung So, 8th moon, day Kwei Maou, there was a comet in Tso She To. It was about 2 cubits in length. On the day Yih Sze it was no longer visible.

Epoch Kaou Tsung, A D 650-683, epoch Lung So, 661-663, 31d year, 663 8th moon, day Kwei Maou, September 29th, day Yih Sze, October 1st
Tso She To, ξ , σ , π Bootis She Ke, M T L

181

A D 667 May 24

In the 2nd year of the epoch Koon Fung, 4th moon, day Ping Shun, there was a comet in the north east. Its place was in Woo Ohay, between S D Peh and Maou. On the day Yih Hae it was no longer visible.

Epoch Koon Fung, 666-667 2nd year, 667 4th moon, day Ping Shun, May 24th, day Yih Hae, June 12th
S D Peh determined by α , γ , δ , & τ Tauri
S D Maou determined by the Pleiades
Woo Ohay, α , β , θ , κ Aurigæ and β Tauri She Ke, M T L

182

A D 676 January 3

In the 2nd year of the epoch Shang Yuen, the 12th moon, day Jin Woo, there was a comet to the south of S D Koo and Kang. It was 5 cubits in length.

Epoch Shang Yuen, 674-675 2nd year, 675 12th moon, day Jin Woo, 676, January 31d
S D Koo determined by α and ζ Virginis
S D Kang determined by ι , κ , λ , θ Virginis She Ke, M T L

183

A D 676 July 7

In the 31d year of the same epoch, the 7th moon, day Ting Hae, there was a comet in the eastern part of S D Tung, pointing towards Pih Ho. It was about 3 cubits in length. Its luminous envelope increased greatly until it became 30 cubits in length. It pointed towards Chung Tso and Wan Ohang. In the 9th moon, day Yih Yew, it disappeared.

Epoch Shang Yuen, 3rd year, 676 7th moon, day Ting Hae, July 7th, 9th moon, day Yih Yew, September 31d
S D Tung determined by δ , ϵ , λ , μ , & Gemma
Pih Ho, α , β , ρ , σ Gemma
Chung Tso, λ , μ Ursa Majoris
Wan Ohang, θ , ν , ϕ Ursa Majoris She Ke, M T L

The 'She Ke' has 'swept Chung Tso and Wan Ohang,' which appears to be the preferable reading.

184

A D 681 *October 17*

In the 1st year of the epoch Kue Tih, the 9th moon, day Ping Shun, there was a comet in the middle of Teen She. It was 50 cubits in length. It gradually lessened and went to the east. It passed on to Ho Koo. On the day Kwei Chow it was no longer visible.

Epoch Kue Tih, 1st year, A D 681 9th moon, day Ping Shun, October 17th
day Kwei Chow, November 3rd

Teen She, space bounded by Scorpions

Ho Koo, α , β , γ Aquila

She He, M T L

185

A D 683 *April 20*

In the 2nd year of the epoch Yung Shun, the 3rd moon, day Ping Woo, there was a comet to the north of Woo Chay. In the 4th moon, day Sin Wei, it disappeared.

Epoch Yung Shun, A D 682-683 2nd year, 683 3rd moon, day Ping Woo,
April 20th, day Sin Wei, May 15th

Woo Chay, α , β , &c. Auriga and β Tauri

She He, M T L

186

A D 684 *July 8*

In the epoch Wan Ming, 1st year, 7th moon, day Sin Wei, there was a comet in the west. It was about 10 cubits in length. In the 8th moon, day Kue Shun, it disappeared.

The epoch Wan Ming does not occur as one of those of this dynasty. In the 'Tung Kien Kang Muh,' vol. 17, it is mentioned as that of one of the princes who assumed sovereignty about this time, and the 1st year coincides with the 1st year of the Emperor Chung Tsung, hence it is A D 684.

7th moon, day Sin Wei, July 8th, 8th moon, day Kue Shun, August 10th

She He, M T L

Biot makes this September 6th and October 9th, by computation it comes out as I have rendered it.

187

A D 684 *September 12*

In the reign of Chung Tsung, the 1st year of the epoch Kwang Tih, the 9th moon, day Tung Chow, there was a star resembling a half moon in the west.

Emperor Chung Tsung, A D 684-709. The epoch Kwang Tih is not in the regular list. In 'M T L,' it is the 1st epoch of Chung Tsung, and thus is, there fore, his 1st year, 684 9th moon, day Tung Chow, September 12th. Biot makes it October 11th.

This was most likely a meteor.

188 A D 707 November 16

In the 1st year of the epoch King Lung, the 10th moon, day Jin Woo, there was a comet in the west. In the 11th moon, day Kea Yin, it disappeared.

King Lung, A D 707-709 1st year, A D 707 10th moon, day Jin Woo,
November 16th, 11th moon, day Kea Yin, December 17th *She Ke, M T L*

189 A D 708 March 30

In the 2nd year of the same epoch, 2nd moon, day Ting Yow, there was a comet between S D Wei and Maou.

King Lung, 2nd year, 708 2nd moon, day Ting Yow, March 30th

S D Wei determined by three stars in Musca

S D Maou determined by the Pleiades *She Ke, M T L*

190 A D 708 September 21

In the 8th moon of the same year, day Jin Shin, there was a comet in Tse Kung

8th moon, day Jin Shin, September 21st

Tse Kung, circle of perpetual apparition

191 Between A D 710 and A D 713

In the 1st year of the epoch Yen Ho, the 6th moon, there was a comet. From Heon Yuen it entered Tse Wei. It passed on to Ta Koo and disappeared.

The epoch Yen Ho is not one of the regular epochs of this dynasty. It appears to have been somewhere between 710 and 713.

Heon Yuen, Regulus and other stars in Leo and Leo Minor

Ta Wei, space between stars in Leo and Virgo

Ta Koo, *Antares*

192 A D 730 June 30

In the reign of Yuen Tsung, the 18th year of the epoch Kae Yuen, the 6th moon, day Kea Tse, there was a comet in Woo Ohay. On the day Kwei Yow the comet was in S D Peih and Maou.

Emperor Yuen Tsung, called also Henen Tsung, A D 713-755, epoch Kae Yuen, 713-741 18th year, 730 6th moon, day Kea Tse, June 30th, day Kwei Yow, July 9th

S D Peih determined by α , γ , δ , ϵ Tauri

S D Maou determined by the Pleiades

Woo Ohay, α , β , γ Aurigae and β Tauri

The latter portion of this, from Kwei Yow, is separate in the original, both in the 'She Ke' and 'M. T. L.' It is, however, evident that both relate to the same comet.

193

A D 739

In the 26th year of the same epoch, the 31d moon, day Ping Tse, there was a comet in Tse Kung. It was bright. It passed through Pih Tow Kwei. After 10 days, being obscured by clouds, it was no more seen.

Kuo Yuen, 26th year, 739

Pih Tow Kwei, the square in Ursa Major

Sho Ke, M T L

194

A D 760 May 16

In the reign of Suh Tsung, the 31d year of the epoch Koen Yuen, the 4th moon, day Ting S'o, there was a comet in the east. Its place was between S D Low and Wei. Its color was white. It was 4 cubits in length. It went rapidly to the east. It passed through S D Maou, Peh, Tsuy Ho, Tsan, and Tung Tsan, to Kwei, Low, and Hoen Yuen. It passed to the west of Yow Ohih Fa. It was seen altogether for about 50 days.

Empire: Suh Tsung, A D 756-762, epoch Koen Yuen, 758-759 31d year, day Ting S'o, 760, May 16th

The Tables give but two years to the epoch Koen Yuen

S D Low determined by α, β, γ Arietis

Wei determined by the three stars in Musca

Maou determined by the Pleiades

Peh determined by $\alpha, \gamma, \delta, \epsilon$ Tauri

Tsuy Ho, or Tsuy, determined by λ and stars in head of Orion

Tsan determined by $\alpha, \beta, \gamma, \delta$ Orionis

Kwei determined by $\gamma, \delta, \eta, \theta$ Canari

Low determined by δ , &c Hydre

Tsung determined by $\gamma, \epsilon, \lambda, \mu$ Geminorum

Hoen Yuen, α Leonis and others in Leo and Leo Minor

Yow Ohih Fa, β Virginis

Sho Ke, M T L

195

A D 760 May 15

In the intercalary moon of the same year, on the day Sin Yow, the 1st day of the moon, a comet was seen in the west. It was 10 cubits in length. When the 5th moon commenced it had disappeared.

The intercalary moon appears to have been that which preceded the 5th moon.

The day Sin Yow will, therefore, be May 15, and the 5th moon June or July.

Sho Ke, M T L

196

A D 767 January 12

In the reign of Tso Tsung, the 1st year of the epoch Ta Luh, the 12th moon, day Ke Hao, there was a comet in Kwa Ohau. It was about a cubit in length. After 20 days it disappeared. It passed over Hwan Ohay.

Emperor Tae Tsung, A D 763-769, epoch Ta Loeh, 766-779 1st year, 766
12th moon, day Ko Hao, January 12, 767

Kwa Chao, α , β , γ , &c Delphin

Hwan Ohay, ϵ , ι , &c Ophiuchi

She Ke, M T L

197

A D 770 June 15

In the 5th year of the same epoch, the 4th moon, day Ke Wai, there was a comet in Woo Ohay Its luminous envelope appeared much disordered It was about 30 cubits in length In the 5th moon, day Ke Maou, the comet was seen in the north Its colour was white On the day Kwei Wei it went to the east, and approached the middle star of Pa Kuh In the 6th moon, day Kwei Maou, it came near San Kung On the day Ko Wei it disappeared

Epoch Ta Loeh, 5th year, 770 5th moon, day Ke Maou, June 15th days,
Kwei Wai, June 19th, Kwei Maou, July 9th, Ko Wai, July 25th

San Kung, three stars near head of Astorion

Pa Kuh, δ , ξ Aurigæ

She Ke, M T L

197*

A D 773 January 17

In the 7th year of the same epoch, the 12th moon, day Ping Yin, there was a tailed star in the lower part of S D Tsan The tail of this comet extended across the heavens from the star Tang in S D Tsan

7th year of epoch Ta Loeh, 772 12th moon, day Ping Yin, 773, January 17

S D Tsan determined by α and other stars in Orion

Tang, a star in Orion not identified

She Ke, M T L

198

A D 815 April.

In the reign of Hoen Tsung, the 10th year of the epoch Yuen Ho, there was a tailed star in Tae Wai The tail extended to Hoen Yuen

Emperor Hoen Tsung, A D 806-820, epoch Yuen Ho, the same, 10th year,
A D 815 3rd moon, April

Tae Wai, space between stars in Leo and Virgo

Hoen Yuen, α , γ , ϵ , λ and others in Leo and Leo Minor

She Ke, M T L

199

A D 817 February 17.

In the 12th year of the same epoch, the 1st moon, day Woo Tze, there was a comet in S D Peh

Yuen Ho, 12th year, 817 1st moon, day Woo Tze, February 17th

S D Peh determined by α and others in Taurus

She Ke, M T L

200

A D 821 *February 27*

In the reign of Muh Tsung, the 1st year of the epoch Chang King, 1st moon, day Ke Wei, there was a comet in S D Yih

Emperor Muh Tsung and epoch Chang King, 821-824, 1st year 1st moon, day Ke Wei, 821, February 27th

S D Yih determined by a and others in China

See Ke, M T L

201

A D 821 *March 7*

In the 2nd moon of the same year, day Ting Maou, there was a comet in Tao Wei, to the west of the star Shang Tseang In the 6th moon the comet was in S D Maou Its length was 10 cubits It was visible altogether for 10 days, after which it disappeared

2nd moon, day Ting Maou, 821, March 7 6th moon, July

Tao Wei, space between stars in Leo and Virgo

Shang Tseang, σ Loomis

S D Maou determined by the Pleiades

See Ke, M T L

202

A D. 828 *July 5*

In the reign of Wan Tsung, the 2nd year of epoch Tao Ho, the 7th moon, day Koa Shin, there was a comet in Yew She To, to the south Its length was 2 cubits

Emperor Wan Tsung, A D 827-840, epoch Tao Ho, 827-835 2nd year, 828 7th moon, day Koa Shin, July 5

Yew She To, η , ν , τ in Bootes

See Ke, M T L

203

A D 829 *December*

In the 31d year of the same epoch, the 10th moon, a strange star was seen in Shwuy Wei

Tao Ho, 31d year, 829 10th moon, November

Shwuy Wei, ζ , θ , σ Canis Minors

See Ke

204

A D 834 *October 9*

In the 8th year of the same epoch, the 9th moon, day Sin Hae, there was a comet in Tao Wei It was about 10 cubits in length Its course was to the north-west It passed over Lang Wei On the day Kang Shin it was no longer visible

Tao Ho, 8th year, 834 9th moon, day Sin Hae, October 9th, Kang Shin, October 18th

Tao Wei, space between stars in Leo and Virgo

Lang Wei, Coma Berenices

See Ke, M T L

205

A D 837 March 22

In the 2nd year of the epoch Kae Ching, the 2nd moon, day Ping Woo, there was comet in S D Wei. It was about 7 cubits in length. It pointed towards Nan Tow. On the day Woo Shin it was to the south west of S D Wei. It was bright, and moved rapidly. On the day Kwei Chow its place was in S D Hien. On the day Sin Yew its length was about 10 cubits. It went to the west, gradually pointing to the south. On the day Jin Souh its place was in Woo Nou. its length was about 20 cubits, and was 3 cubits in breadth. On the day Kwei Hae the tail was still broad. In the 3rd moon, day Koa Tse, its place was in Nan Tow. On the day Yih Chow its length was 50 cubits, the end (of the tail) being divided into two branches, the one pointing to S D To, the other covering S D Fang. On the day Ping Yin its length was 6 cubits, and was no longer branched. It pointed to the north. Its place was in the 7th degree of S D Kang. On the day Ting Maou it went to the north-west, pointing to the east. On the day Ko Sse its length was about 80 cubits. its place was then in S D Chang. On the day Kwei Wei it was but 3 cubits in length. its place was to the right of Hien Yuen. After this it was no longer visible.

Epoch Kae Ching, A D 836-840 2nd year, 837 2nd moon, day Ping Woo, March 22 days, Woo Shin, March 24, Kwei Chow, March 29, Sin Yew, April 6, Jin Souh, April 7, Kwei Hae, April 8 3rd moon, day Koa Tse, April 9, Yih Chow, April 10, Ping Yin, April 11, Ting Maou, April 12, Ko Sse, April 14, Kwei Wei, April 28

S D Wei determined by α Aquarii and θ , ϵ Pegasi
 Hien determined by β Aquarii and another
 To determined by α , β , γ , ϵ Librae
 Fang determined by β , δ , π in Scorpio
 Kang determined by ι , κ , λ , θ Virginis
 Chang determined by κ , λ , μ , & ϵ Hydri
 Tow, or Nan Tow, determined by δ , μ , & ϵ Sagittarii
 Woo Nou, or Nou, determined by ν , μ , ν , & ϵ Aquarii
 Hien Yuen, α and others in Leo and Leo Minor

'N T L' adds, in a kind of note, a sentence implying that, generally speaking, it may be looked upon as a constant rule, that when a comet appears in the morning its direction is to the west, and to the east when it appears in the evening

206

A D 837 April 29

In the same moon, day Koa Shin, a strange star was seen in the lower part of S D Tang, to the east

Day Koa Shin, 837, April 29th

S D Tang determined by γ , ϵ , λ , μ , & ϵ Geminorum

Sho Ai

207 A D 837 *May 3*

On the day Woo Tze a strange star was seen within Twan Mun, near the star Ping

Day Woo Tze, May 31d

Twan Mun, between β and η Virginis

Star Ping, ν and others in Vugo

*She Ke*208 A D 837 *May 21*

In the 4th moon of the same year, day Ping Woo, the strange star seen in the lower part of S D Tang, to the east, disappeared

837 4th moon, day Ping Woo, May 21st

S D Tang, as above This relates to No 206

*She Ke*209 A D 837 *June 17*

In the 5th moon, day Kwai Yow, the strange star seen in Twan Mun disappeared

5th moon, day Kwai Yow, June 17th

Twan Mun See No 207, to which this relates

*She Ke*210 A D 837 *June 26*

In the same moon, day Jin Woo, a strange star, like a comet, was seen in Nan Tow, near Teen Yo

Day Jin Woo, June 26th

Nan Tow, same as S D Tow, determined by δ , μ , & ϵ Sagittarii

Teen Yo, not identified

*She Ke*211 A D 837 *September 9*

In the 8th moon of the same year, day Ting Yow, there was a comet in the S D Hsu and Wai

837 8th moon, day Ting Yow, September 9th

S D Hsu determined by β Aquarii and another

S D Wai determined by α Aquarii and θ , ϵ Pegasi

*She Ke, M T L*212 A D 838 *November 11*

In the 31d year of the same epoch, the 10th moon, day Yih Szo, there was a comet in S D Chin and Kwai It was about 20 cubits in length The tail gradually pointed to the west

Kae Chung, 31d year, 838 10th moon, day Yih Szo, November 11th

S D Chin determined by β , & ϵ Corvi

S D Kwai determined by γ , δ , & ϵ Cancri

She Ke, M T L

213

A D 838 November 21

In the 11th moon, day Yih Maou, there was a comet in the east. Its place was in S D Wei and Ko, from east to west. It extended across the heavens. In the 12th moon, day Jin Shin, it was no longer seen.

11th moon, day Yih Maou, November 21, Jin Shin, December 8

S D Wei determined by ϵ , μ , ν , &c in Scorpion

S D Ko determined by γ , δ , ϵ , &c Sagittarii

Sha Ke, M T L

This may possibly be a continuation of the preceding account

214

A D 839 February 7

In the 4th year, 1st moon, day Kwai Yew, there was a comet in Yu Lan

Kao Ohng, 4th year, 839 1st moon, day Kwai Yew, February 7th

Yu Lan, δ , τ , χ and others in Aquarius

Sha Ke, M T L

215

A D 839 March 12

In the intercalary moon of the same year, day Ping Woo, there was a comet in Kouen Oho, to the north-west. In the 2nd moon, day Ke Maou, it disappeared.

The intercalary moon appears to have been that immediately preceding the 2nd moon. Hence the day Ping Woo will be March 12, and the 2nd moon, Ke Maou, April 14.

Kouen Oho, ϵ , ν and others in Pisces

Sha Ke, M T L

216

A D 840 March 20

In the 5th year of the same epoch, 2nd moon, day Kang Shin, there was a comet in Ying Shih, to the east, between that and S D Peh. On the 20th day it disappeared.

Epoch Kao Ohng, 5th year, 840 2nd moon, day Kang Shin, March 20

Ying Shih, same as S D Shih, determined by α Pegasi and others

S D Peh, determined by γ Pegasi, &c

Sha Ke, M T L

217

A D 840 December 3

In the 11th moon of the same year, day Woo Shin, there was a comet in the east

840 11th moon, day Woo Shin, December 3d

Sha Ke, M T L

218

A D 841 July

In the reign of Woo Tsung, the 1st year of the epoch Hwuy Chang, the 7th moon, there was a comet in Yu Lan, between Ying Shih and the east of the S D Peh.

Emperor Woo Tsung and epoch Hwuy Chang, A D 841-846 1st year, 841 7th moon, July

S D Shih determined by α Pegasi and others
 Ying Shih, same as α Pegasi
 S D Peh determined by γ Pegasi and α Andromedae
 Yu Lan, δ , τ and others in Aquarius

She Ke, M T L

219

A D 841 *December 22*

In the 11th moon of the same year, day Jin Yin, there was a comet near Pih Lo Sze Mun. Its place was in Ying Shih. It entered Tse Kung. In the 12th moon, day Sin Maou, it was no longer visible.

841 11th moon, day Jin Yin, December 22, 12th moon, day Sin Maou, February 9, 842

S D Shih determined by α Pegasi and others
 Pih Lo Sze Mun, Fornacis
 Tse Kung, circle of perpetual apparition

She Ke, M T L

This date is unsatisfactory, the day Sin Maou not falling in the 12th moon

220

A D 851 *April*

In the reign of Souan Tsung, the 6th year of the epoch Ta Chung, the 31d moon, there was a comet in S D Tsey and Tsan, near the star Tung.

Emperor Souan Tsung and epoch Ta Chung, A D 846-859 6th year, 851, 31d moon, April

S D Tsey determined by λ and small stars in head of Orion
 S D Tsan determined by α , β , γ , δ Orionis.
 Tung, unascertained star in Orion

She Ke, M T L

221

A D 856 *September 27*

In the 11th year of the same epoch, the 9th moon, day Yih Wei, there was a comet in S D Fang. It was 3 cubits in length.

Ta Chung, 11th year, 856 9th moon, day Yih Wei, September 27

S D Fang determined by β , δ , π , &c in Scorpio

She Ke, M T L

222

A D 864 *June 21*

In the reign of the Emperor E Te Tsung, the 5th year of the epoch Han Tung, the 5th moon, day Ke Hae, in the evening, a comet was seen in the north-east, through an opening in the clouds, for not more than 15 minutes. Its colour was yellowish white. It was 3 cubits in length, and was in S D Low.

Emperor E Te Tsung and epoch Han Tung, A D 860-873 5th year, 864, 5th moon, day Ke Hae, June 21

S D Low determined by α , β , γ Arietis

She Ke, M T L

223 A D 868 February

In the 9th year of the same epoch, the 1st moon, there was a comet in S D Lew and Wei

Han Tung, 9th year, 868 1st moon, February

S D Lew determined by α , β , γ Arietis

S D Wei determined by the three stars in Musca

She Ke, M T L

224 A D 869 September

In the 10th year of the epoch Han Tung, 8th moon, there was a comet to the north east of Ta Ling

Han Tung, 10th year, 869 8th moon, September

Ta Ling, τ and others in Perseus

She Ke, M T L

225 A D 877 June

In the reign of Ho Tsung, the 4th year of the epoch Koon Foo, the 5th moon, a comet was seen

Emperor Ho Tsung, A D 874-888, epoch Koon Foo, 874-879 4th year, 877
5th moon, June

She Ke, M T L

226 A D 885

In the 1st year of the epoch Kwang Ko a comet was seen in Tsoih Shwuy, between that and Tsoih Sun

Epoch Kwang Ko, 885-887 1st year, 885

Tsoih Shwuy, λ , μ Persei

Tsoih Sun, χ Geminorum and μ Cancri

She Ke, M T L

227 A D 886 June 13

In the 2nd year of the same epoch, 5th moon, day Ping Souh, there was a comet in S D Wei and Ke It passed through Pih Tow and Sho To

Kwang Ko, 2nd year, 886 5th moon, day Ping Souh, June 13

S D Wei determined by ϵ , μ , ν , &c in Scorpio

S D Ke determined by γ , δ , ϵ Sagittarii

Pih Tow, α , β , γ , &c Ursa Majoris

Sho To, stars in feet of Bootis

228 A D 891 May 12

In the reign of Ohaou Tsung, the 2nd year of the epoch Ta Shun, the 4th moon, day Kang Shun, there was a comet in San Tao It went to the east It entered Tao Wei It swept Ta Koo and Teen Sho It was about 100 orbits in length. In the 5th moon, day Koa Souh, it was no longer visible

Emperor Chaou Tsung, A D 889-904, epoch Ta Shun, 890-891 2nd year,
 891 4th moon, day Kang Shin, May 12 5th moon, day Koa Seng, July 5
 San Tao, foot of Ursa Major
 Tao Wai, space within stars in Leo and Virgo
 Teen She, space bounded by Serpens
 Ta Koo, Aioturus *She Ke, M T L*

229

A D 892 *December*

In the 1st year of the epoch King Fuh, the 11th moon, there was a comet in S D
 Tow and Now

Epoch King Fuh, A D 892-893 1st year, 892 11th moon, December
 S D Tow determined by ζ , τ , σ , ϕ , &c in Sagittarius
 S D New determined by α , β , &c Capricorn *She Ke, M T L*

230

A D 893 *May 6*

In the 2nd year of the same epoch, the 3rd moon, the heavens were for a long time
 covered with clouds In the 4th moon, on the day Yih Yow, the clouds gradually
 opened, and a comet was soon in the evening in Shang Tao It was about 100 cubits in
 length It went to the east It entered Tao Wai and swept Ta Koo It entered Teen
 She After 37 days it increased in length to about 200 cubits (*sic*), when the weather
 becoming cloudy it could no longer be seen

Epoch King Fuh, 2nd year, 893 3rd moon, April 4th moon, day Yih Yow,
 May 6th

Shang Tao, ι , κ Ursa Majoris Ta Koo, Aioturus
 Tao Wai, space within stars in Leo and Virgo
 Teen She, space bounded by Serpens *She Ke, M T L*

Pingrid has 895 for the year and June 25 for the day, the Tables give the
 year 893, &c as above

231

A D 894 *February*

In the 1st year of the epoch Keen Ning, the 1st moon, there was a comet in Shun
 Shou

Epoch Keen Ning, A D 894-897 1st year, 1st moon, 894, February
 Shun Shou, one of the 12 kung, answering to our zodiacal sign Gemini or
 Cancer It comprises the S D Tung and Kwai, the stars composing which are in
 Gemini and Cancer *M T L*

232

A D 905 *May 22*

In the 2nd year of the epoch Toon Yew, the 4th moon, day Koa Shin, there was a
 comet in Ho Pih, Kwan, and Wan Chang It was about 30 cubits in length It

entered Chung Tao and Hoa Tao. In the 5th moon, on the day Yih Chow, in the evening, it was in the left angle of Moon Yuon, extending towards the west of Teen Sho. In the morning the luminous envelope had an exceedingly angry appearance. It extended across the heavens. On the day Ping Yin it was cloudy, and when, on the day Sin Wai, it ceased a little from raining, the comet was no longer visible.

Epoch Teen Yew, A D 904-905 2nd year, 905 day Koa Shin, May 22 5th moon, day Yih Chow, June 12, Ping Yin, June 13, Sin Wai, June 18

Ho Pih, or Pih Ho, α , β , ρ , σ Geminorum

Kwan, Corona Borealis

Wan Chang, θ , ϕ , ν Ursa Majoris

Chung Tao, Hoa Tao, stars in the foot of Ursa Major

Moon Yuon, α and other stars in Leo and Leo Minor

Teen Sho, space bounded by Serpens

She Ke, M T L

WOO TAN, III. FIVE SHORT DYNASTIES, A D 907-960

HOW, OR LATER TANG, A D 907-922

233

A D 912 May 13

In the reign of Tuo Tsao, the 2nd year of the epoch Koon Hwa, the 4th moon, day Jin Shin, a comet appeared in S D Chang. On the day Koa Souh the comet was in Tang Tao.

Emperor Tuo Tsao, A D 907-912, epoch Kan Hwa, 911-912 2nd year, 912 4th moon, day Jin Shin, May 13, day Koa Souh, May 15

S D Chang determined by λ , λ , μ , &c Hydus

Tang Tao, χ Loomis and small stars near

She Ke, M T L

HOW, OR LATER TANG, A D 923-935

234

A D 928 October 14

In the reign of Ming Tsung, the 3rd year of the epoch Teen Chung, the 10th moon, day Kang Woo, a comet appeared in the south-west. It was about 10 cubits in length. It pointed to the south-east. Its place was in the 5th degree of S D Now. After three evenings it was no longer visible.

Emperor Ming Tsung and epoch Teen Chung, 926-929 3rd year, 928 10th moon, day Kang Woo, October 14

S D Now determined by α , β , &c Capricorn

She Ke, M T L

235

A D 936 *October 28*

In the reign of Fai Te, the 31d year of the epoch Tsching Tse, the 9th moon, day Ke Chow, a comet appeared in S D Hsu and Wei. It was about 1 cubit in length. It was very small. It passed the stars Teen Luy and Kuh.

Emperor Fai Te, A D 934-935, epoch Tsching Tse, 31d year, 936 9th moon, day Yih Chow, October 28

S D Hsu determined by β Aquarii and another

S D Wei determined by α Aquarii and θ , π Pegasus

Teen Luy, ξ Aquarii, λ Capricorni, and others

Kuh, μ Capricorni

She Ke, M T L

'M T L' has Mo Te for Fai Te

How Tsing, A D 936-946

236

A D 941 *September 18*

In the reign of Kaou Tsao, the 6th year of the epoch Teen Fuh, the 9th moon, day Jin Tse, a comet appeared in the west. It swept Teen She Yuan. It was about 10 cubits in length.

Emperor Kaou Tsao and epoch Teen Fuh, 936-944 6th year, 941 9th moon, day Jin Tse, September 18

Teen She Yuan, space bounded by Serpens

M T L

237

A D 943 *November 5*

In the 8th year of the same epoch, 10th moon, day Kang Souh, in the evening, a comet was seen in the east. It pointed to the west. The tail was 10 cubits in length. Its place was in the 9th degree of S D Keo.

Teen Fuh, 8th year, 943 10th moon, day Kang Souh, November 5

S D Keo determined by α and ζ Virginis

She Ke, M T L

'M T L' has 1 cubit in length

How Chow, A D 951-960

238

A D 956 *March 13*

In the reign of She Tsung, the 31d year of the epoch Hean Tih, the 1st moon, day Jin Seuh, in the evening, there was a comet in S D Tsan. The tail pointed to the south east.

She Tsung, A D 954-959, epoch Hean Tih the same 31d year, 956 1st moon, day Jin Seuh, March 13

S D Tsan determined by α , β , γ , &c Orionis

She Ke, M T L

THE LATER SUNG DYNASTY, A D 960-1279

239

A D 975 April

In the reign of Tao Tsao, the 8th year of the epoch Kao Paou, the 31d moon, a comet was seen in the east

Emperor Tao Tsao, 960-975, epoch Kao Paou, 968-975 8th year, 975 31d moon, April

240

A D 975 August 3

In the 6th moon of the same year, day Kao Tse, a comet appeared in S D Low. It was 40 cubits in length. In the morning it was seen in the east. It pointed to the south-west. It passed over Yu Kwei. It went on to the eastern part of S D Pui. Altogether it passed through 11 S D in 83 days, and then disappeared.

Kao Yuon, 8th year, 975 6th moon, day Kao Tse, August 3

S D Low determined by δ , ϵ , ζ , θ Hydra

S D Pui determined by α Andromeda and γ Pegasi

Yu Kwei, same as S D Kwei, determined by γ , δ , η , θ Cancer M T L

241

A D 989 August 13

In the reign of Tao Tsung, the 2nd year of the epoch Twan Kung, 6th moon, day Woo Tse, there was a comet in the eastern part of S D Tsang, to the west of Tsouh Shuwy. Its colour was a bluish white. Its luminous envelope gradually increased in length. In the morning it was seen for 10 days in the north-east, and to the north-west in the evening. It passed over Yow Shu To. It was visible altogether for 30 days, after which it disappeared.

Emperor Tao Tsung, A D 976-997, epoch Twan Kung, 988-989 2nd year, 989 1st moon, day Woo Tse, August 13

S D Tsang determined by γ , ϵ , λ , μ , &c Gemma

S D Kang determined by ι , κ , λ , ϕ Virgo

Yow Shu To, η , τ , ν Bootis

Tsouh Shuwy, λ , μ Pegasus M T L

242

A D 998 February 23

In the reign of Chung Tsung, the 1st year of the epoch Han Ping, the 1st moon, day Kao Shu, there was a comet to the north of Ying Shih. Its luminous envelope was about 1 cubit in length. It passed on until the day Ting Yow, when it disappeared. It was altogether seen for 14 days.

Emperor Chung Tsung, A D 998-1022, epoch Han Ping, 998-1003 1st year, 998 1st moon, day Kao Shu, February 23, day Ting Yow, March 8

Ying Shih, same as S D Shih, determined by α , β Pegasus, &c M T L

243

A D 1003 December 23

In the 6th year of the same epoch, the 11th moon, day Koa Yin, there was a comet in S D Tsing and Kwei. It was like a large cup. Its colour was a bluish white. Its luminous envelope was about 4 cubits in length. It entered Woo Choo Shih. It passed over Woo Chay and entered S D Tann. It was visible altogether for about 30 days after which it disappeared.

Epoch Han Ping, 6th year, 1003 11th moon, day Koa Yin, December 23

S D Tsing determined by γ , ϵ , λ , μ , & κ Geminaurum

Kwei determined by γ , δ , η , θ Canori

Tann determined by α , β , γ , δ , & ϵ Orionis

Woo Choo Shih, θ , ν , τ , & κ Geminaurum Woo Chay, α , β , & κ Aurigæ, &c
M T L

244

A D 1018 August 4

In the 2nd year of the epoch Teon Hoo, the 6th moon, day Sin Hoo, a comet appeared in Pih Tow Kwei, to the north-east of the 2nd star. It was more than 3 cubits in length. It went to the north of the 1st star in Pih Tow. It passed near Teon Laou and over Wan Chang. Its length was then about 30 cubits. It passed through Tsoi Wei, San Tso, and Hoon Yuen. Its course was to the west until it arrived at Tsoih Sing. It was visible altogether for 37 days, and then disappeared.

Epoch Teon Hoo, A D 1017-1021 2nd year, 1018 6th moon, day Sin Hoo
August 4th

Pih Tow Kwei, the square in Ursa Major,

Teon Laou, ω , & ϵ Ursa Majoris Wan Chang, θ , ν , ϕ , & κ Ursa Majoris

San Tso, the stars in the foot of Ursa Major

Hoon Yuen, Regulus and other stars in Leo and Leo Minor

Tsoih Sing, the seven stars in S D Sing, determined by α , σ , τ , & κ Hydre
M T L

245

A D 1035 September 15

In the reign of Jin Tsung, the 2nd year of the epoch King Yow, the 8th moon, day Jin Souh, in the evening, there was a comet in S D Chang and Yih. It was 7 cubits in length and $\frac{1}{4}$ ths of a cubit in breadth. After 12 days it disappeared.

Emperor Jin Tsung, A D 1023-1063, epoch King Yow, 1034-1037 2nd year, 1035 day Jin Souh, September 15

S D Chang determined by α , λ , μ , & κ Hydre

S D Yih determined by α , & κ Cisternæ

M T L

246

A D 1036 January 15

In the 12th month of the same year, day Ko Wei, in the evening, a comet appeared in Wao Ping. It had a luminous envelope.

12th moon, day Ko Wei, 1036, January 15th

Wao Ping, α , β , ϵ and others in the band of Pisces

M T L

247

A D 1049 *March 10*

In the 1st year of the epoch Hwang You, the 2nd moon, day Ting Maou, a comet appeared in S D Hen. In the morning it was seen in the east. It pointed to the south-west. It passed through Tse Wei and arrived at the S D Low. It was visible for 114 days, and then disappeared.

Epoch Hwang You, A D 1049-1053 1st year, 1049 2nd moon, day Ting Maou, March 10

S D Hen determined by β Aquarii and another

S D Low determined by α , β , γ Arietis

Tse Wei, circle of perpetual apparition

M T L

248

A D 1056 *August*

In the 1st year of the epoch Koa Yew, the 7th moon, a comet appeared in Tse Wei. It passed through Tsch Sing. Its colour was white. It was about 10 cubits in length. It passed on until the 8th moon, day Kwei Hae, when it disappeared.

Epoch Koa Yew, A D 1056-1063 1st year, 1056 7th moon, August

Tse Wei, circle of perpetual apparition

Tsch Sing, the seven stars. These appear to be the seven bright stars in Ursa Major.

249

A D 1066 *April 2*

In the reign of Ying Tsung, the 3rd year of the epoch Che Ping, the 3rd moon, day Ke Wei, a comet appeared in Ying Shih. It was seen in the east in the morning, and was more than 7 cubits in length. It pointed to the south-west and to the S D Wei, extending to the stars Fun Moo. It gradually went afar off to the east. It approached the sun, and consequently could then not be seen. On the day Sin Sze it was again seen in the evening, to the north-west. It appeared like a star, without a bright envelope. It went to the east, increasing in size, and resembled a white vapour more than 3 cubits in breadth. It connected together Tse Wei, Ksch Sing, and S D Fang. The head and (the end of) the tail were obscured by clouds. It still went to the east. It passed Wan Chang and Pih Tow and crossed the S D Wei. On the day Jin Woo the star had regained its luminous envelope. The comet was then about 10 cubits in length and about 3 in breadth. It pointed to the north-east. It passed over Woo Chay, at which time the white vapour was divided into two branches. It crossed the heavens, passing through Pih Ho, Woo Choo How, Hoon Yuen, Tse Wei, and Woo Te Tao, into Woo Choo How. It extended towards S D Koo, Kang, Te, and Fang. On the day Kwei Wei the comet was 15 cubits in length, and had round it a vapour resembling in form a Shing Ko (a kind of measure). Its course was thus from Ying Shih to S D Chang. In the north it altogether passed through 14 S D. It was visible for 67 days, after which the star, the vapour, and the comet, all disappeared.

Emperor Ying Tung and epoch Che Ping, 1064-1067 31d year, 1066 31d moon, day Ke Wei, April 2 days, Sin Sze, April 24, Jin Woo, April 25, Kwei Wei, April 26

S D Ying Shih, or Shih, determined by α Pegasi and stars near

Wei determined by ϵ , μ , ν , &c in Scorpio

Keo determined by α Virginis and another

Fang determined by α , δ , π , ρ in Scorpio

Kang determined by ι , κ , λ , θ Virginis

Te determined by α , β , γ , ν Libris

Chang determined by κ , λ , μ , &c Hydri

Ts'o Wei, circle of perpetual apparition

Keh Sing, stars near the Pole

Tse Wei, space between stars in Leo and Virgo

Fun Moo, α , η , π and others in Aquarius

Wan Chang, θ , ν , ϕ and others in Ursa Major

Pih Tow, α , β , γ , δ , &c in Ursa Major

Woo Chay, α , β , &c Aurigæ and β Tauri

Pih Ho, α , β , &c Cominorum

Woo Choo How, θ , ι Cominorum, and also two groups of small stars between the head of Virgo and Coma Berenices These must not be confounded together, the second Woo Choo How referred to in the text appearing to be the last-mentioned stars

Heen Yuen, Regulus and stars in Leo and Leo Minor

Woo To Tse, β Leonis and other stars near

M T L

It is singular that this very remarkable comet is not noticed in the 'Sho Ke' In the 'Tung Keen Kang Moo' the account is as follows — 'In the reign of Yung Tung, the 31d year of the epoch Che Ping, a comet was seen in the west during the 31d moon' The 'Commentary' remarks, 'It resembled the planet Venus, and was 15 cubits in length When it was in S D Poih it was like the moon'

S D Poih determined by α , γ , δ , &c Tauri

This comet appears to have attracted much attention, and to have excited no little alarm in Europe, as we learn from contemporary writers that it was looked upon as a forerunner of various calamities among others, the death of Harold and the subsequent conquest of England by William the Norman, is attributed by them to the influence of this comet Zonares, the Greek historian, in his account of the reign of the Emperor Constantine Duca, describes it as having been as large as the full moon, and at first without a tail, on the appearance of which it diminished in size thus corroborating the Chinese accounts, as given in 'M T L' and the 'Tung Keen Kang Moo'

250

A D 1095 November 17

In the reign of Shun Tsung, the 8th year of the epoch Ho Ning, the 10th moon, day Yih Wei, a star appeared in the south-east, in the middle of the degrees of S D Chin. It was like the planet Saturn, of a bluish white. On the day Ping Shin it produced towards the north-west a luminous envelope, 3 cubits in length, pointing in a slanting direction to S D Chin. It thus resembled a comet. On the day Tung Yow the luminous envelope was 5 cubits in length. On the day Woo Seuh it was 7 cubits in length, pointing in a slanting direction towards Tso Hsa. It went on until the day Ting Wei, when it entered the clouds and was no more seen.

Epoch Shun Tsung, 1068-1085, epoch Ho Ning, 1068-1077 8th year, 1075 10th moon, day Yih Wei, November 17, Ping Shin, November 18, Tung Yow, November 19, Woo Seuh, November 20, Ting Wei, November 29

S D Chin determined by β and others in Corvus

Tso Hsa, γ Corvi

251

A D. 1080 August 10

In the 31d year of the epoch Yuen Fung, the 7th moon, day Kwei Wei, a comet appeared in the north-west part of Tse Wei Yuen, to the south of Lang Wei. It resembled a white vapour, 10 cubits in length. It pointed in a slanting direction to the south-east. Its place was in the middle degrees of S D Chin. On the day Ping Seuh it went in a north-westerly direction. Its place was then in the middle degrees of S D Yih. On the day Woo Tze it was 3 cubits in length, and went in a sloping direction across Lang Wei. On the day Kwei Maou (Kwei Sze) it entered Hoon Yuen. On the day Ting Yow, the weather being thick, it could not be seen. On the day Kang Tze it again appeared in the morning, in the middle degrees of S D Chang, until the day Woo Woo, when, having been visible altogether for 36 days, it disappeared, and was no more seen.

Epoch Yuen Fung, A D 1078-1085 31d year, 1080 7th moon, day Kwei Wei, August 10, Ping Seuh, August 13, Woo Tze, August 15, Kwei Sze (for Kwei Maou, see below), August 20, Ting Yow, August 24, Kang Sze, August 27, Woo Woo, September 14

There is an obvious error in the original, the day Kwei Maou having been put for Kwei Sze. This is proved by summing up the days during which the comet was seen, which are said to have been 36. reckoning Kwei Maou as one, they will amount to 96, whereas with Kwei Sze their number will be 36, as recorded above.

S D Chin determined by β and others in Corvus

Yih determined by α and others in Orion

Chang determined by λ , λ , μ and others in Hydra

Tao Wei Yuen, space between stars in Leo and Virgo

Lang Wei, stars in Coma Berenices

Hoon Yuen, Regulus and others in Leo and Leo Minor

252

A D 1097 October 6

In the reign of Che Tsung, the 4th year of the epoch Shaou Shing, the 8th moon, day Ke Yew, a comet appeared in the middle degrees of S D To. It resembled the planet Saturn. It was like a bright white vapour, 3 cubits in length. It pointed in a slanting direction to the star Pa in Teen She Yuen. In the 9th moon, day Jin Tse, the luminous envelope was 5 cubits in length. It entered Teen She Yuen. On the day Ke Wei it invaded Teen She Hwan. On the day Kang Shin it was near To Two in Teen She Yuen. On the day Woo Shin it disappeared, and was no more seen.

Emperor Che Tsung, A D 1086-1100, epoch Shaou Shing, 1094-1097 4th year, 1097 8th moon, day Ke Yew, October 6, day, Jin Tse, October 9, Ke Wei, October 10, Kang Shin, November 6, Woo Shin, November 14

S D To determined by $\alpha, \beta, \gamma, \delta$ Labias

Teen She Yuen, space bounded by Serpens

Teen She Hwan, unascertained

Pa, δ Serpentis To Two, α Hiculis

M T I.

253

A D 1106 February 10

In the reign of Hway Tsung, the 5th year of the epoch Tsung Ning, the 1st moon, day Woo Souh, a comet appeared in the west. It was like a great Poi Kow. The luminous envelope was scattered. It appeared like a broken-up star. It was 60 cubits in length and was 3 cubits in breadth. Its direction was to the north east. It passed S D Kwei. It passed through S D Low, Wei, Maou, and Peh. It then entered into the clouds and was no more seen.

Emperor Hway Tsung, A D 1101-1125, epoch Tsung Ning, 1102-1106 5th year, 1106 1st moon, day Woo Souh, February 10

S D Kwei determined by β, δ, ϵ Andromedæ and stars in Pegasus

Low determined by α, β, γ Arietis

Wei determined by the three stars in Musca

Maou determined by the Plouades

Peh determined by $\alpha, \gamma, \delta, \epsilon, \zeta$ Tauri

Poi Kow is a kind of vessel or measure

M T I.

This appears to have been a large meteor, as it seems to have been seen for a short time only.

254

A D 1110 May 29

In the 4th year of the epoch Ta Kwan, the 5th moon, day Ting Wei, a comet appeared in S D Kwei and Low. Its luminous envelope was 6 cubits in length. It went to the north and entered Tse Wei Yuen. When in the north west it entered the clouds and was no more seen.

Epoch Ta Kwan, A D 1107-1110 4th year, 1110 5th moon, day Ting Wei, May 29th

S D Kwei determined by β , δ , ϵ , &c Andromeda and stars in Pisces

S D Low determined by α , β , γ Arietis

Tsao Wei Yuan, circle of perpetual apparition

M T L

255

A D 1126 *May 20*

In the reign of Kin Tsung, the 1st year of the epoch Tsung Kang, the 6th moon, day Jin Seuh, a comet appeared in Tsao Wei Yuan

The Commentary in the 'Tung Koen Keang Muh' adds, 'Its length was reckoned at 10 cubits Its direction was to the north It passed over Te Tso and swept Wan Chang'

Emperor Kin Tsung and epoch Tsung Kang, A D 1126 1st year, 1126 6th moon, day Jin Seuh, May 20

Tsao Wei Yuan, circle of perpetual apparition

Te Tso, possibly Polaris, which is named Te a Hercules has also the same appellation

Wan Chang, ϕ , μ , ν Ursa Majoris

M T L, Tung Koen

256

A D 1126 *December*

In the intercalary 11th moon of the same year a comet was seen in the horizon

A D 1126 intercalary 11th moon, December

M T L

257

A D 1131 *September*

In the reign of Kaou Tsung, the 1st year of the epoch Shaou Hing, the 9th moon, a comet was seen

Emperor Kaou Tsung, A D 1127-1162, epoch Shaou Hing, 1131-1162 1st year, 1131 9th moon, September

M T L

258

A D 1132 *January 5*

In the 12th moon of the same year a comet was seen on the day Woo Yin

12th moon, 1132, day Woo Yin, January 5

M T L

259

A D 1132 *August 14*

In the 2nd year of the same epoch, the 8th moon, day Kea Yin, a comet was seen in S D Wei In the 9th moon, day Kea Seuh, it disappeared

Epoch Shaou Hing, 2nd year, 1132 8th moon, day Kea Yin, August 14, day Kea Seuh, September 3

S D Wei determined by the three stars in Musca

M T L

260 A D 1145 *April 26*

In the 15th year of the same epoch, the 4th moon, day Woo Yin, a comet appeared in the degrees of the southern S D. In about 50 days it disappeared. On the day Ping Shin it was seen in the degrees of S D Tsan.

15th year of epoch Shao Hing, A D 1145 4th moon, day Woo Yin, April 26,
day Ping Shin, May 14
S D Tsan determined by α , β , & Orionis M T L

261 A D 1145 *June 4*

In the 5th moon of the same year, day Ting Sze, a comet was seen. Its colour was a bluish white.

1145 5th moon, day Ting Sze, June 4 M T L

262 A D 1147 *January 6*

In the 16th year of the same epoch, 12th moon, day Woo Souh, a comet appeared in the south-west of S D Wei.

16th year, 1146 12th moon, day Woo Souh, 1147, January 6
S D Wei determined by α Aquarii and θ , ϵ Pegasi M T L

263 A D 1147 *February 12*

In the 17th year of the same epoch, the 1st moon, day Yih Hae, a comet appeared in the north-east, in the S D Neu. On the 2nd day of the 2nd moon it was no longer visible.

17th year, A D 1147 1st moon, day Yih Hae, February 12, 2nd moon, 2nd
day, March 7
S D Neu determined by ϵ , μ , ν , & Aquarii M T L

264 A D 1151 *August 21*

In the 22nd year of the same epoch, 7th moon, day Ping Woo, a comet was seen in the north-east, in S D Tang. On the day Ting Wei the star was like the planet Jupiter. Its luminous envelope was 1 cubit in length.

2nd year, A D 1151 7th moon, day Ping Woo, August 21, day Ting Wei,
August 22
S D Tang determined by γ , ϵ , λ , & Geminorum M T L

265 A D 1222 *September 15*

In the reign of Ning Tsung, the 15th year of the epoch Kea Ting, the 8th moon, day Kea Woo, a comet appeared in Yew Sho Te. Its luminous envelope was 30 cubits

in length. Its body was small, like the planet Jupiter. It was seen for 2 months. It passed through S D To, Fang, and Sing, and then disappeared.

Emperor Ning Tsung, A D 1195-1224, epoch Koa Ting, 1208-1224 15th year, 1222 8th moon, day Koa Woo, September 15

S D To determined by α , β , γ , ν Libra

Fang determined by β , δ , π , &c in Scorpio

Sin determined by Antares and others in Scorpio

Yow She Te, η , τ , ν Bootis

This is the last of the comets recorded in the 'Encyclopædia of Ma Twan Lin'. Those which follow are taken chiefly from the Supplement to that work and the 'She Ko'.

266 A D 1232 October 18

In the reign of Lo Tsung, the 5th year of the epoch Shao Ting, the intercalary 9th moon, day Kang Souh, a comet appeared in S D Koo.

Emperor Lo Tsung, A D 1225-1264, epoch Shao Ting, 1228-1233 5th year, 1232 intercalary 9th moon, day Kang Souh, October 18

S D Koo determined by α and ζ Virginis

267 A D 1240 January 31

In the 4th year of the epoch Koa Ho, the 1st moon, day Sin Wei, a comet appeared in Ying Shih.

Epoch Koa Ho, 1237-1240 4th year, 1240 1st moon, day Sin Wei, Jan 31

S D Shih determined by α , β Pegasi, &c

Ying Shih, α Pegasi

268 A D 1240 February 23

In the 1st moon of the same year, day Koa Woo, a comet passed over Yuh Lang, to the north west of the second star.

1240 1st moon, day Koa Woo, February 23

Yuh Lang, α , β , &c Cassiopeia

This may possibly be a continuation of the account of the preceding comet.

269 A D 1264 July 26

In the 5th year of the epoch King Ting, 7th moon, day Koa Souh, at night, a comet appeared in S D Low. Its tail extended across the heavens. On the day Koa Maou it passed into S D Kwei. In the 8th moon, day Sin Sze, it entered S D Tsung. On the day Woo Woo it could not be seen. On the day Koa Tzeo it returned, and was seen in S D Tsan. On the day Sin Wei it was resolved into a reddish vapour.

Epoch King Ting, 1260-1264 7th moon, day Kea Seuh, July 26, day Ko Maou, July 31 8th moon, day Sin Sze, August 2, Woo Woo, September 8, Kea Tzeo, September 14, Sin Wei, September 21

S D Lew determined by δ , ϵ , & θ Hydre

Kwa determined by γ , δ , η , θ Cancri

Tung determined by γ , ϵ , λ , μ , & θ Geminorum

Tsan determined by α , β , γ , & θ Orionis

LIAOU, A MINOR DYNASTY, A D 916-1125

270 A D 941 *August 7*

In the reign of Tae Tsung, the 4th year of the epoch Hway Tung, the 8th moon, day Jin Shin, there was a comet near the star Tan

Emperor Tae Tsung, 927-947, epoch Hway Tung, 938-946, 4th year 8th moon, day Jin Shin, 941, August 9

Star Tan, α Hædræ

271 A D 1014 *February 10*

In the reign of Shung Tsung, the 31d year of the epoch Kuo Tao, the 1st moon, day Yih Wei, a comet was seen in the west

Emperor Shung Tsung, 983-1031, epoch Kuo Tao, 1012-1021 31d year, 1014 1st moon, day Yih Wei, February 10

272 A D 1066 *April 24*

In the reign of Taou Tsung, the 2nd year of the epoch Han Yung, the 31d moon, day Jin Woo, a comet was seen in the east

Emperor Taou Tsung, 1055-1100, epoch Han Yung, or Han Ning, 1065-1074 2nd year, 1066 31d moon, day Jin Woo, April 24

273 A D 1080 *January 6*

In the 5th year of the epoch Tao Kang, the 12th moon, day Ping Woo, a comet passed over S D Wei

Epoch Tao Kang, 1075-1084 5th year, 1079 12th moon, day Ping Woo, 1080, January 6

S D Wei determined by ϵ , μ , ν , & θ in Scorpio

274 A D 1097 *December 6*

In the 31d year of the epoch Show Lung, the 10th moon, day Ke Sze, a comet was seen in the west

Epoch Show Lung, 1095-1110 31d year, 1097 10th moon, day Ke Sze, December 6th

KIN, A MINOR DYNASTY, A D 1118-1236

275 A D 1133 *September 29*

In the reign of Tse Tsung, 10th year of the epoch Teen Hwuy, 8th moon, day Sin Hae, a comet appeared in Wan Chang

Emperor Tse Tsung and epoch Teen Hwuy, 1124-1135 10th year, 1133
8th moon, day Sin Hae, September 29
Wan Chang, θ , ν , ϕ , &c Ursa Majoris

276 A D 1226 *September 13*

In the reign of Souen Tsung, the 6th year of the epoch Hing Ting, the 8th moon, day Ke Maou, a comet appeared in S D Koo and Kang, between Yew Oho To and Chow Ting. It pointed towards Ta Koo. In the 1st year of the epoch Yuen Kwang, 9th moon, day Ting Wei, it disappeared.

Emperor Souen Tsung, 1217-1228, epoch Hsen Ting, 1221-1226 6th year, 1226 8th moon, day Ke Maou, September 13 epoch Yuen Kwang, 1227-1228, 9th moon, day Ting Wei, September 12

S D Koo determined by α and ξ Virginis

S D Kang determined by ι , κ , λ , θ Virginis

Yew Oho To, η , τ , ν Bootis

Chow Ting, small stars in Coma Berenices

Ta Koo, Aioturus

277 A D 1237 *September 21*

In the reign of the Emperor Gao Tsung, the 1st year of the epoch Teen Hing, the 9th moon, day Ke Yew, a comet was seen in the east. It was about 10 cubits in length, twisted and bent like an elephant's tail. It appeared in S D Koo and Ohin. It went to the south. On the 12th day it was 20 cubits in length. On the 16th day it could not be seen, on account of the brightness of the moon. On the 27th day, in the 5th watch of the night, it reappeared, and was seen in the south-east. It was then about 40 cubits in length. On the 1st day of the 10th moon it began to fade. It was visible altogether for 48 days.

Emperor Gao Tsung, 1229-1237, epoch Teen Hing, 1st year, 1237 9th moon, day Ke Yew, September 21 5th watch of night, 1 to 3 A M

S D Koo determined by α and ξ Virginis

S D Ohin determined by β , &c Corvi

Biot places this comet under 1232, October 17. According to the Tables, 1232 was the 4th year of the epoch Chung Tu. Biot's day is right for 1232, but not for 1237. No comet is mentioned in the 'She Ko' as having been seen in 1232. The 'Tung Koon' says a comet was seen in that year in Keo, but gives no particulars.

The above is from the Supplement to 'Ma Twan Ian'.

YUEN DYNASTY, A.D 1280-1367

*The whole of the descriptions which follow are from the Supplement to
'M T L' and the 'She Ko'*

278

A.D 1264 July 26.

In the reign of She Tsao, the 1st year of the epoch Oho Yuen, 7th moon, a comet appeared in S D Kwei. In the evening it was seen to the north-west. It passed through Shang Tao and swept Wan Chang in Tase Wei, as well as Pih Tow. In the morning it was seen in the north east. It was visible altogether for about 40 days.

Emperor She Tsao, 1264-1294, epoch Oho Yuen the same 1st year, 1264

According to the Chinese Chronological Tables, the Tartar Emperor She Tsao commenced his reign over China A.D 1280, which was the 17th year of his epoch, Oho Yuen. Hence the 1st year was 1264. His Tartar name was Ilwuh Peh Loo, hence the Kublai of European writers.

S D Kwei determined by γ , δ , η , θ Cancri

Tase Wei, the circle of perpetual apparition

Shang Tao, ϵ , κ in fore foot of Ursa Major

Pih Tow, α , β , &c Ursa Majoris

The account in the 'She Ko' differs considerably, having some additional particulars. It is as follows —

In the reign of She Tsao, the 1st year of the epoch Oho Yuen, in the autumn, day Koa Souh, a comet appeared in S D Kwei and Low. In the evening it was seen in the north-west. Its brightness illuminated the heavens. It measured 100 cubits in length. It passed through Shang Tao. It swept Tase Wei, Wan Chang, and Pih Tow. In the morning it was seen in the north east. It was visible altogether for about 40 days.

Emperor She Tsao, as above, Oho Yuen, 1st year, 1264 7th moon, day Koa Sou, July 26

S D Kwei determined by γ , δ , η , θ Cancri

S D Low determined by δ , ϵ and others in Hydra

For the remaining asterisms see above

279

A.D 1277 March 9

In the 14th year of the same epoch, 2nd moon, day Kwei Hae, a comet appeared in the north-east. It was about 4 cubits in length.

Oho Yuen, 14th year, 1277 2nd moon, day Kwei Hae, March 9.

280

A D 1293 November 7

In the 30th year of the same epoch, 10th moon, day Kang Yin, a comet entered Tse Wei Yuan. Its course was towards Tow Kwei. Its luminous envelope was more than 1 cubit in length. It was visible for 1 moon and then disappeared.

Ose Yuan, 30th year, 1293 10th moon, day Kang Yin, November 7

Tse Wei Yuan, circle of perpetual apparition

Tow Kwei, the square in the seven stars of Ursa Major. The Pole star is sometimes called Tow Kwei.

Biot has Pih Tow for Tow Kwei.

281

A D 1299 June 24

In the reign of Ohing Tsung, the 2nd year of epoch Ta Tih, the 12th moon, day Koa Souh, a comet appeared beneath the stars Tse and Sun.

Epoch Ohing Tsung, 1295-1307, epoch Ta Tih, 1297-1307 2nd year, 1298 12th moon, day Koa Souh, 1299, January 24

Tse, λ Columbae Sun, θ , κ Columbae

282

A D 1301 September 16

In the 5th year of the same epoch, 9th moon, day Yih Chow, from the 8th moon, day Kang Shin, a comet appeared in $24^{\circ} 40'$ of the S D Tsung. It was like the great star in Nan Ho. Its colour was white. Its length was 5 cubits. Its direction was towards the north-west. It afterwards passed to the south of Wan Chang and Tow Kwei. It swept Tao Yang. It also swept Teen Ko of Pih Tow, Tse Wei Yuan, San Kung, and the stars in Kwan So. Its length was about 10 cubits. It passed into Teen She Yuan, to the east of the stars Pa and Shuh, and to the south of the stars Leang and Tsew, and above the star Sung. It was then a full cubit in length. It was altogether visible for 46 days, and then (on the day first mentioned) disappeared.

It is to be remarked, that the description of this comet commences with the day Yih Chow, being that of its disappearance. A few words have been added to make the description more intelligible. It is only slightly mentioned in the 'She Ko'.

Epoch Ta Tih, 3rd year, 1301 5th moon, day Kang Shin, September 16, 9th moon, day Yih Chow, October 31

S D Tsung determined by γ , ϵ , λ , &c. Geminorum.

Tse Wei Yuan, circle of perpetual apparition

Teen She Yuan, space bounded by Scorpens

Nan Ho, α , β , &c. Canis Minoris. The great star, Procyon

Wan Chang, θ , ν , ϕ , &c. Ursa Majoris

Tow Kwei, the square in the seven stars of Ursa Major

Tao Yang, χ Ursa Majoris

Pih Tow, α , β , γ , &c Ursa Majoris
 Kwan So, Omnia Borealis
 Pa, ϵ Serpentis Shuh, α , λ Serpentis
 Leang, δ Ophiuchi Tao, ϵ Ophiuchi
 Sung, π Ophiuchi Teen Ke, γ Ursa Majoris

283

A D 1304 February 3

In the 8th year of the same epoch, the 3rd moon, day Yih Chow, from the day Kang Souh of the preceding 12th moon a comet was seen. It was nearly a full cubit in length. It pointed towards the south-east. Its colour was white. Its place was in the 11th degree of S D Shih. It gradually increased to about a cubit in length, and then it pointed towards the north-west. It swept Tang Shay and entered T'ao Wei Yuen, and (on the day first mentioned) disappeared. It was visible altogether for 74 days.

As in the account of the preceding comet the day of disappearance is placed first. The following extract from the annals of the Yuen dynasty in the 'Sho Ke,' may be of service in explaining this rather ambiguous mode of expression. It relates to the same comet, and is to be found in the division Yuen Shih, section 4.

Ta Tih, 7th year, 12th moon, day Kang Souh, a comet about a cubit in length was seen in the 11th degree of S D Shih. It entered T'ao Wei Yuen. In the 8th year, 3rd moon, day Yih Chow, the comet began to disappear. It was visible altogether for 74 days.

Epoch Ta Tih, 7th year, 1303 12th moon, day Kang Souh, 1304, Feb 3.
 8th year, 3rd moon, day Yih Chow, April 18, 1304.

S D Shih determined by α , β , &c Pegasi

T'ao Wei Yuen, circle of perpetual apparition

Tang Shay, π Cygni and stars in Andromeda and Lacerta, 22 in number

284

A D 1313 April 13.

In the reign of Jin Tsung, the 2nd year of the epoch Hwang King, 3rd moon, day Ting Wei, a comet appeared in the eastern part of S D Tang.

Empire Jin Tsung and epoch Hwang King, A D 1312-1320 2nd year, 1313
 3rd moon, day Ting Wei, April 13

S D Tang determined by γ , ϵ , λ , μ , &c Gemminum.

285

A D 1315 November 28

In the 2nd year of the epoch Yen Yow, the 11th moon, day Ping Woo, a strange star appeared, which afterwards became a comet. It entered T'ao Wei Yuen. It passed through the S D from Chin to Peh, being 15 of those divisions. The next year, 2nd moon, day Kang Yin, it disappeared.

Epoch Yen Yew, 1314-1320 2nd year, 1315 11th moon, day Ping Woo,
 November 28 3rd year, 2nd moon, day Kang Yin, 1316, March 12
 S D Peh determined by γ Pegasi and α Andromedæ
 S D Chin determined by β and others in Corvus

286

A D 1337 May 4

In the reign of Shun To, the 3rd year of the epoch Ohe Yuan, in the summer, 4th moon, day Koa Seuh, there was a comet in Yuh Lang. It remained until the 7th moon, day Sin Yin, when it finished its course in Kwan So.

Shun To, 1333-1367, epoch Ohe Yuan, 1335-1340 3rd year, 1337 4th moon, day Koa Seuh, May 4, 7th moon, day Sin Yin, July 31

Yuh Lang, α , β , η and others in Cassiopeia

Kwan So, Corona Borealis

Biot considers this comet as the same as the next. It is, however, treated as a separate one both in 'Ma Twan Lin' and in the 'Sho Ko,' in which there is no intimation that the comet which follows, although on the same page, is in any way connected with it. It is, therefore, treated as a separate comet here.

287

A D 1337 June 26

In the reign of Shun To, the 3rd year of the epoch Ohe Yuan, the 5th moon, a comet was seen to the north east. It resembled the great star in Toon Ohuen. Its colour was white. It was about 1 cubit in length. The tail pointed to the south-west. Its place was estimated to be in the 5th degree of S D Maou. On the day Woo Shin its course was to the south-west. On the succeeding days it gradually increased in velocity. On the day Sin Wei, of the 6th moon, the luminous envelope had lengthened to about 2 cubits. On the day Ting Chow it swept Shang Ohing. On the day Ko Maou the luminous envelope had increased still more in length, being then about 3 cubits. It entered Yuan Wei. On the day Jin Woo it swept Hwa Kuo and the star Keang. On the day Yih Yow it swept the great star Kow Ohing, and extended to Teen Hwang Ta To. On the day Ping Seuh it passed through Sze Foo and crossed Kou Sun. On the day Koa Woo it left Yuan Wei. On the day Ting Yow it passed out of Tse Wei Yuan. On the day Woo Seuh it entered Kwan So and swept Toon Ko. In the 7th moon, day Kang Tse, it swept Hsiao Keon. On the day Kwa Maou it passed the stars Ohing and Tan and entered Toon Sho Yuan. On the day Ping Woo it swept Loo Sze. On the day Ko Yow the moon was so bright that the luminous envelope could scarcely be distinguished. The comet left Toon Sho Yuan and swept the star Leang. On the day Sin Yow the luminous envelope had greatly diminished in length. It was then in S D Fang, above the star Keen Po, and directly west of the middle star of the asterism Fu. It was not easy to ascertain exactly the place of the comet after it had gradually gone to the south. It was visible altogether for 63 days. Its course was from S D Maou to S D Fang, making altogether 15 S D through which it passed, and afterwards disappeared.

The preceding account is from the Supplement to 'Ma T'wan Lan,' and it must be observed that in the original, as I have it, an error occurs, the epoch there given being Ohe Ohing instead of Ohe Yuen. That this is really an error is proved by the following account of the same comet, as it is given in the 'She Ko'—

'In the 31d year of the epoch Ohe Yuen, the 5th moon, day Ting Maou, a comet was seen in the north east. It was like the great star in Toon Ohuen. Its colour was white. It was about 1 cubit in length. The tail pointed to the south-west. It was altogether visible for 63 days. (Its course was) from S D Maou to S D Fang. It passed through 15 S D and then disappeared.'

The error is accordingly corrected in the text given, and does not occur in Biot. The day of the comet's first appearance (Ting Maou), which does not appear in 'M T L,' is also given in this extract from the 'She Ko'. The comet appears to have been very carefully observed, and its course registered, almost day by day, until it went so far to the south as to render the observations difficult, and, consequently, uncertain. It must also be noticed, that the comet is described as passing through 15 S D, viz from Maou (the Pleiades) to Fang (stars in Scorpio). Now as the greater number of the observations were made while the comet was within the circle of perpetual apparition, where the degrees are greatly contracted, such a circumstance could easily occur.

Epoch Ohe Yuen, 31d year, 1337. 5th moon, day Ting Maou, June 26. 6th moon, day Sin Wei, June 30, Ting Chow, July 6, Ko Maou, July 8, Jin Woo, July 11, Yih Yew, July 14, Ping Souh, July 15, Koo Woo, July 23, Ting Yew, July 26, Woo Souh, July 27. 7th moon, Kang Tso, July 29, Kwoi Maou, August 1, Ping Woo, August 4, Ko Yew, August 7, Sin Yow, August 19.

S D Maou determined by the Pleiades

S D Fang determined by β , δ , π , &c in Scorpio

Teen She Yuen, space bounded by Serpens

Toon Ohuen, α , β , δ , &c. Perseus. The great star, α Perseus

Shang Ohing, A 579 Camelopardalis (Reeves)

Yuen Wei, stars in Draco

Hwa Kae, stars in Camelopardalis. Keang, unascertained

Kow Ohing, α Ursa Majoris.

Teen Hwang Ta Te, Polaris

Sze Foo, four small stars near the Pole

Kou Sin, unascertained

Kwan So, Corona Borealis

Teen Ka, θ and other small stars in Hercules

Ho Keen, γ Hercules. Ohing, γ Serpentes. Tain, χ Hercules

Lee Sze, λ Ophiuchi and other stars near

Leang, δ Ophiuchi

Keen Pa, ν in Scorpio

Fa, ϵ , ψ , ϕ Inhibes (Reeves). Stars in Scorpio (Noel)

288

A D 1340 *March 24*

In the 6th year of the same epoch, 2nd moon, day Ke Yew, a comet appeared resembling the great star in S D Fang. Its colour was white. In appearance it resembled a mass of the refuse of silk. Its length was about half a cubit. The tail pointed to the south-west. Its place was in the seventh degree of S D Fang. It went slowly to the north-west until the 3rd moon, day Kang Shin. It was altogether visible for 32 days.

One Yuen, 6th year, 1340 2nd moon, day Ke Yow, March 24, 3rd moon, day Kang Shin, April 24.

S D Fang determined by β , δ , π in Scorpio.

The great star in Fang, β in Scorpio. Possibly Antares is really the star meant.

289

A D 1351 *November 24*

In the 11th year of the epoch Oho Ohing, on the day Sun Hae, a comet was seen in S D Kwei. On the day Kwei Chow it was seen in S D Low. On the day Koa Yin it was in S D Wei. On the day Yih Maou it was still in that division. On the day Ping Shun it was seen in S D Maou. On the day Ting S'zo it was seen in S D Peh.

Epoch Oho Ohing, 1341-1367 11th year, 1351 11th moon, day Sun Hae, November 24, Kwei Chow, November 26, Koa Yin, November 27, Yih Maou, November 28, Ping Shun, November 29, Ting S'zo, November 30.

S D Kwei determined by α and others in Andromeda and Pisces.

Low determined by α , β , γ Arietis.

Wei determined by the three stars in Musca.

Maou determined by the Pleiades.

Peh determined by α , γ , δ , &c Tau.

290

A D 1356. *September 21*

In the 16th year of the same epoch, the 8th moon, day Koa Souh, a comet was seen precisely in the east. It appeared in Hoen Yuen, in the angle to the left of the great star in that asterism. Its colour was a bluish white, the tail pointed to the south-west. Its length was about 1 cubit. It was in $17^{\circ}\frac{1}{2}$ of the S D Ohang. In the 10th moon, day Woo Woo, it disappeared. It was traced to the north-west for about 40 days.

Epoch Oho Ohing, 16th year, 1356 8th moon, day Koa Souh, September 1.

Hoen Yuen, Regulus and γ , ϵ , η , λ and others in Leo and Leo Minor.

The great star in Hoen Yuen, Regulus.

291

A D 1360 *March 12*

In the 20th year of the same epoch, 3rd moon, day Woo Tze, there was a comet in the north-east.

Oho Ohing, 20th year, 1360 3rd moon, day Woo Tze, March 12.

292

A D 1362 *March 5*

In the 22nd year of the same epoch, 2nd moon, day Yih Yow, a comet was seen. Its luminous envelope was about a cubit in length. Its colour was a bluish white. Its place was in $7^{\circ} 20'$ of S D Wei. On the day Ting Yow the comet passed near the western star of Le Kung. At the end of the 2nd moon the luminous envelope was about 20 cubits in length. In the 3rd moon, day Woo Shin, the comet could not be seen as a star, but only as a white vapour of a curved form, extending across the heavens and pointing to the west. It swept Tu Keo. On the day Jin Sze the comet passed before Tse Yang, it had then the appearance of a star without a tail. In form it resembled a great wine-cup. The colour was white, like the obscure twilight. Its place was in the 6th degree of S D Mao. On the day Woo Woo it began to disappear.

The account of this comet in the 'She Ke' commences thus — 'On the day Yih Yow a comet was seen in S D Wei. Its luminous envelope was about 10 cubits in length.' The remainder is nearly the same as in 'M T L,' the difference being merely verbal.

Che Ohng, 22nd year, 1362 2nd moon, day Yih Yow, March 5, Ting Yow, March 17, Woo Shin, March 28, Sin Tzeo, April 1, Woo Woo, April 7

S D Wei determined by α Aquari and θ , ϵ Pegasus

S D Mao determined by the Pleiades

Le Kung, three groups of two stars each in Pegasus they are λ , μ , η , σ , ν , τ

Tu Keo, Arcturus Tse Yang, γ Ursa Majoris

293

A D 1362. *June 29*

In the same year, the 6th moon, day Sin Sze, a comet was seen in Tze Wei Yuen. Its place was in $2^{\circ} 38'$ of S D New. Its colour was white. Its luminous envelope was about a cubit in length, pointing to the south east. Its course was to the south west. On the day Woo Tzeo the luminous envelope of the comet swept Shang Tzeo. In the 7th moon, day Yih Mao, it began to disappear.

Che Ohng, 22nd year, 1362 6th moon, day Sin Sze, June 29, day Woo Tzeo, July 6 7th moon, day Yih Mao, August 2

S D New determined by α , β , & ϵ Capricorni

Tze Wei Yuen, circle of perpetual apparition

Shang Tzeo, θ Draconis

294

A D 1363 *March 16*

In the 23rd year of the same epoch, 3rd moon, day Sin Chow, the 1st day of the moon, a comet was seen in the east. It was visible during that moon, and then disappeared.

Che Ohng, 23rd year, 1363 3rd moon, day Sin Chow, March 16

295

A D 1366 October 25

In the 26th year of the same epoch, 9th moon, day Kang Sze, a comet was seen in Tze Wei Yuen, near the star Kwan in Pih Tow. Its colour resembled that of a handful of meal. It appeared nearly as large as a Tow measure. Its course was to the south-east, and it passed near to the star Teen Kae. On the day Sin Chow the place of the comet was in $18^{\circ} \frac{10}{100}$ of S D Wei. On the day Sin Yin it was in $2^{\circ} \frac{10}{100}$ of S D New. On the day Kwei Maou the comet was in $9^{\circ} \frac{10}{100}$ of S D New. On the day Kae Shin it was in $0^{\circ} \frac{10}{100}$ of S D Hsu. On the day Yih Sze the comet appeared in Tze Wei Yuen, between the stars Kwan and Yuh Kang in Pih Tow. It was then in S D Ohm. It went to the south-east and passed over Teen Kae. It traversed Tsan Tse, Leen Taou, and S D Hsu, to the western star of Luy Peh Ohn, when it began to disappear.

Such is a nearly literal translation of the account of this comet in the Supplement to 'Ma Twan Lan,' and it is not at all surprising that Biot should make the following remark, 'Le marche indiqué pour cette comète est très singulier,' as nothing can be more inconsistent than that a comet, after a long course from Ursa Major to Aquarius, where it was observed on Oct. 29, should on the very next day, Oct. 30, be found once more in Ursa Major, in the same place whence it started, and again take its course southward, in the same direction as at first. But if the narrative in the original be carefully examined, it will be found to divide readily into two distinct portions, the one giving the course of the comet through the S D, and the other that through some of the asterisms in that course. All that is required is to read the account according to this view, and a consistent narrative will be the result. Let, then, the concluding observations be read thus,—'On the day Yih Sze (October 30) the comet (after having been first seen in Tze Wei Yuen, between the stars Kwan and Yuh Kang in Pih Tow, at which time it was in S D Ohm, then going to the east, passing near Teen Kae, and traversing Tsan Tse, Leen Taou, and S D Hsu), arrived at the western star of Luy Peh Ohn, where it disappeared.' In corroboration of this view it may also be remarked, that the asterisms mentioned in this second portion will all be found in the path of the comet through the S D mentioned, supposing them to be carried to the Pole, and thus the whole account becomes perfectly consistent. It must also be remarked, that in these Chinese accounts of comets there are several examples of the latest observation being that first mentioned. Thus, in the comets of 1301, September 16, and 1315, November 28, the day of the disappearance is placed first, as in the second portion of the preceding narrative.

Ohn Ohing, 26th year, 1366 9th moon, day Kang Sze, October 25, Sin Chow, October 26, Jin Yin, October 27, Kwei Maou, October 28, Kae Shin, October 29, Yih Sze, October 30

S D Wei determined by α , μ , ν , &c. Aquarii

New determined by α , μ , ν , &c. in Scorpio

Hsu determined by β Aquarii, &c.

Ohn determined by β Corvi and others

Tze Wei Yuen, circle of perpetual apparition

Kwan, δ Ursa Majoris
 Yuh Kang, α Ursa Majoris
 Pih Tow, α , β , & γ Ursa Majoris
 Teen Kae, β , γ Draconis
 Tuan Tse, β , δ , & ϵ Lyrae
 Leen Tsou, η , θ Lyrae
 Luy Peh Chin, small stars in Aquarius and Pisces.

MING DYNASTY, A D 1368-1644

296 A D 1368 February 7

In the reign of Tse Tsao, the 1st year of the epoch Hung Woo, 1st moon, day Kang Yin, a comet was seen in S D Maou and Peh

Emperor Tse Tsao and epoch Hung Woo, 1368-1398 1st year, 1368 1st moon, day Kang Yin, February 7

S D Maou determined by the Pleiades

S D Peh determined by α , γ , δ , ϵ , & Tau1

297 A D 1368 April 8

In the 3rd moon of the same year, day Sin Maou, a comet appeared in S D Maou, to the north, between Ta Lang and Teen Ohuen. It was about 8 cubits in length, and pointed towards Wan Chang. It came near Woo Ohay. In the 4th moon, day Ko Yew, it disappeared to the north of Woo Ohay.

1368 3rd moon, day Sin Maou, April 8, Ko Yew, April 26

S D Maou determined by the Pleiades

Ta Lang, β , & Persei

Woo Ohay, α , β , & Auriga and β Tau1

Wan Chang, θ , ν , & Ursa Majoris

Teen Ohuen, α , γ , δ , & Persei

This was possibly the same as the preceding comet.

298 A D 1373 May

In the 6th year of the same epoch, 4th moon, three comets entered Tse Wei Yuen

Hung Woo, 6th year, 1370 4th moon, May

Tse Wei Yuen, circle of perpetual apparition

299 A D 1391 May 23

In the 24th year of the same epoch, 4th moon, day Ping Tse, there were two comets. One entered Tse Wei Yuen by the Chung Ho gate. It passed near Teen Ohwang. The other passed near Luh Kae, and swept Woo To Nuy Tse.

Hung Woo, 24th year, 1391 4th moon, day Ping Tse, May 13
 Tseo Wen Yum, circle of perpetual apparition
 Chung Ho Mun, space between α and ϵ Draconis
 Toen Ohwang, small stars near θ Draconis
 Luh Kse, small stars in Camelopardalis
 Woo To Nuy Tseu, small stars near Polaris

300 A D 1407 December 14

In the reign of Ching Tseu, 5th year of epoch Yung Lo, 11th moon, day Ping Yin, a comet was seen

Emperor Ching Tseu and epoch Yung Lo, 1403-1424 5th year, 1407 day Ping Yin, December 14

301 A D 1431 May 15

In the reign of Souen Tsung, the 6th year of the epoch Souen Tih, 4th moon, day Woo Souh, there was a comet in the eastern part of S D Tsung. It was about 5 cubits in length

Emperor Souen Tsung and epoch Souen Tih, 1426-1435 6th year, 1431
 4th moon, day Woo Souh, May 15
 S D Tsung determined by γ , ϵ , λ , &c. Gemma

Biot makes the date of this Kang Souh May 27, which is also correct as to the day, it being a subsequent date

302 A D 1432 February 3

In the 7th year of the same epoch, the 1st moon, day Jin Souh, a comet appeared in the east. It was about 10 cubits in length the tail swept Teem Tam. It went to the south east. In the 10th moon it began to disappear

Biot has, 'After 10 days it began to disappear,' which is the most probable reading. It is not in 'M T L.'

Souen Tih, 7th year, 1432 1st moon, day Jin Souh, February 3, 10th moon, November

Toen Tam, α , γ , δ , ϵ and others in Cygnus

303 A D 1432 February 29 or October 26

In the same moon, on the day Woo Tseu, another comet appeared in the west. After 17 days it disappeared

It is not clear whether this refers to the 1st or to the 10th moon. If the 1st, then Woo Tseu will be February 29, if the 10th, October 26

304

A D 1433 *September 15*

In the 8th year of the same epoch, the intercalary 8th moon, day Jin Sze, a comet appeared in Teen Tsang. It was more than 10 cubits in length. On the day Ko Sze it entered Kwan So and swept Tsenh Kung. On the day Ko Maou it again entered Teen She Yuen and swept the star Tam. It was visible for 24 days, and then disappeared.

Seuen Tih, 8th year, 1433 intercalary 8th moon, day Jin Tze, September 15,
Ke Sze, October 2, Ke Maou, October 12

Teen Tsang, θ , ι , λ Bootis

Kwan So, Corona Borealis Tan, α Hercules

Tsenh Kung, δ , μ and others in hand of Bootes

Teen She Yuen, space bounded by Serpens

305

A D 1439 *March 25*

In the reign of Ying Tsung, the 4th year of epoch Ching Tung, the intercalary 2nd moon, day Ke Chow, a comet was seen in S D Chang. It was large, and like a ball. On the day Ting Yow it was about 50 cubits in length. It went to the west. It swept Tsew Ke. It then went to the north and passed into S D Kwei.

Emperor Ying Tsung and epoch Ching Tung, 1436-1439 Ching Tung, 4th year, 1439, intercalary 2nd moon, day Ke Chow, March 25 Ting Yow, April 2

S D Chang determined by δ , κ , λ , μ Hydor

S D Kwei determined by γ , δ , η , θ Cancer

Tsew Ke, ξ , ψ , ω Leonis and κ , ξ Cancer

306

A D 1439 *July 12*

In the 6th moon of the same year, day Woo Yin, a comet was seen in S D Peih, near the asterism so called. It was about 10 cubits in length. It pointed towards the south-west. It was visible altogether for 55 days, and then disappeared.

1439 6th moon, day Woo Yin, July 12

S D Peih determined by γ Pegasi and α Andromedæ

307

A D 1444 *August 6*

In the 9th year of the same epoch, the 7th moon, day Kang Woo, a comet was seen in Tae Wei Yuen, to the east. It was more than 10 cubits in length. It gradually increased in length until the intercalary 7th moon, day Ko Maou, when it entered S D Keo and disappeared.

Ching Tung, 9th year, 1444 7th moon, day Kang Woo, August 6, Ko Maou, August 15

S D Keo determined by α and ζ Virginia.

Tae Wei Yuen, space within stars in Leo and Virgo

308

A D 1449 *December 20*

In the 14th year of the same epoch, 12th moon, day Jin Taz, a comet was seen in Toon She Yuen, near to She Low. It passed through the degrees of S D Wei. It was 2 cubits in length. It was seen until the day Yih Hae, when it disappeared.

Chung Ting, 14th year, 1449 12th moon, day Jin Taz, December 20, day Yih Hae, 1450, January 12

S D Wei determined by ϵ , μ , ν , &c in Scorpio

She Low, μ Ophiuchi

Toon She Yuen, space bounded by Serpens

309

A D 1450 *January 19*

In the reign of King Te, the 1st year of the epoch King Tao, the 1st moon, day Jin Woo, a comet appeared just without the boundary of Toon She Yuen. It swept Toon Ke.

Emperor King Te and epoch King Tao, 1450-1456 1st year, 1450 1st moon, day Jin Woo, January 19

Toon She Yuen, space bounded by Serpens

Toon Ke, small stars near θ Monchi

This is most likely the same comet as the preceding one

310

A D 1452 *March 21*

In the 3rd year of the same epoch, 3rd moon, day Koa Woo, the 1st day of the moon, there was a comet in S D Poh.

King Tao, 3rd year, 1452 3rd moon, day Koa Woo, March 21

S D Poh determined by α , γ , δ , ϵ , &c Tauri

Biot makes this 2nd moon March 5. March 21 is correct for the day Koa Woo. March 5, in 1452, was Woo Yin.

311

A D 1456 *May 27*

In the 7th year of the same epoch, the 4th moon, day Jin Souh, a comet was seen to the north-east, in S D Wei. It was 2 cubits in length, and pointed towards the south-west. In the 5th moon, day Kwai Yow, it gradually lengthened to about 10 cubits. On the day Woo Taz, it was seen to the north-west, in S D Lew. It was then about 9 cubits in length. It swept over the stars Hoan Yuen. On the day Koa Woo it was seen in S D Chang. It was then about 7 cubits in length. It swept the north of Taz Wei. It went to the south-west. In the 6th moon, day Jin Yin, it entered Taz Wei Yuen. It was then about 1 cubit in length.

King Tao, 7th year, 1456 4th moon, day Jin Souh, May 27, 5th moon, day Kwai Yow, June 7, 6th moon, day Jin Yin, July 6

S D Wei determined by the three stars in Musca

S D Lew determined by δ , ϵ , ζ , θ Hydre
 Chang determined by κ , λ , μ , &c Hydre
 Heen Yuan, Regulus and stars in Leo and Leo Minor
 Tuo Wei Yuan, space between stars in Leo and Virgo

312

A D 1457 *January 14*

In the 12th moon of the same year, day Kea Yin, another comet was seen in S D Peih. It was half a cubit in length. It went to the south-east. It gradually lengthened until the day Kwei Wei, when it disappeared.

King Tse, 7th year, 1456 12th moon, day Kea Yin, 1457, January 14, Kwei Hae, January 23

S D Peih determined by α , γ , δ , ϵ , &c Tauri

313

A D 1457 *June 15*

In the reign of Ying Tsung, the 1st year of the epoch Teon Shun, the 5th moon, day Ping Seuh, a comet was seen in S D Wei. It was like the star Ohaou Yaou. It went to the east. Its luminous envelope was half a cubit in length, pointing to the south-west. In the 6th moon, day Kwei Sze, the 1st day of the moon, it was seen in S D Shih. It was then about 10 cubits in length, the tail extended to the east of S D Peih, and was near Teon Ta Tseang Koun, the 31d star in Kouen Sho, S D Tsing, and the 2nd southern star in Shihwuy Wei.

Emperor Ying Tsung, 1436-1464. This Emperor was taken prisoner by the Tartars in 1450 and restored in 1457, when he adopted the epoch Teon Shun, 1457-1464. 1st year, 1457 5th moon, day Ping Seuh, June 15, day Kwei Sze, June 22

S D Wei determined by α Aquarii and θ , ϵ Pegasi

Shih determined by α , β Pegasi and others

Peih determined by γ Pegasi and α Andromedae

Tsing determined by δ , ϵ , λ , μ , &c Geminorum

Ohaou Yaou, β Bootis Kouen Sho, ν Persae

Teon Ta Tseang Koun, γ and others in Andromeda and Triangulum

Shihwuy Wei, ζ , θ , σ , π Canis Minoris

314

A D 1457 *October 26*

In the 10th moon of the same year, day Ko Hae, a comet was seen in S D Koo. It was about half a cubit in length, pointing to the north. It passed near the northern star of Keo and the eastern star of Ping Taou.

1457 10th moon, day Ko Hae, October 26

S D Koo determined by Spica and another in Virgo

Northern star, ζ Virginis

Ping Taou, θ and another in Virgo

315

A D 1461 August 5

In the 5th year of the same epoch, 6th moon, day Woo Souh, a comet was seen in the east. It pointed to the south west. It entered S D Tang. In the 7th moon, day Ping Yin, it began to disappear.

Toen Shun, 5th year, 1461 6th moon, day Woo Souh, August 5, day Ping Yin, September 2

S D Tang determined by γ , α , λ , &c. Gemmaurum

316

A D 1465 March

In the reign of Hoan Tsung, 1st year of the epoch Ching Hwa, 2nd moon, a comet was seen. In the 3rd moon it was again seen, in the north west. It was about 30 cubits in length. It was visible during the 3rd moon, and then disappeared.

Emperor Hoan Tsung and epoch Ching Hwa, 1465-1467 1st year, 1465 2nd moon, March, 3rd moon, April

317

A D 1468 September 18.

In the 4th year of the same epoch, the 9th moon, day Ko Wei, there was a star seen in the 5th degree of S D Sing. For 5 days it went to the north east. Its luminous envelope was about 30 cubits in length. The tail pointed to the south west. It changed into a comet. It was afterwards seen in the morning, in the east. In the evening it was seen in the south of S D Shih. It passed through San Kang, Pih Tow, Yaou Kwang, and Tsieh Kung. It turned and entered Toen Sho Yuen. It left Yuen and gradually decreased. It passed over the first star to the west of Toen Ping. In the 11th moon, day Kang Shun, it disappeared.

Ching Hwa, 4th year, 1468 9th moon, day Ko Wei, September 18, Kang Shun, December 8.

S D Sing determined by α and others in Hydus

S D Shih determined by α , β Pegasi, &c.

Yaou Kwang, η Ursa Majoris.

Tsieh Kung, δ , μ and others in Bootes

Toen Sho Yuen, space bounded by Serpens

Toen Ping, unascertained

318

A D 1472 January 16

In the 7th year of the same epoch, 12th moon, on the day Koa Souh, a comet was seen in Toen Toen. It pointed towards the west. It suddenly went to the north. It passed through Yow Sho Te. It swept Shang Tseang in Tao Wei Yuen, and also Hing Ohn, Tao Tso, and Tsung Kwan. The tail pointed directly to the west. It swept across Tuo Wei Yuen and Lang Wa. On the day Ko Maou the luminous envelope had lengthened greatly. It extended from east to west across the heavens. It went northwards about 28 degrees. It passed near Toen Tsang and swept Pih Tow, San Kung,

and Tse Yang. It entered Tse Wei Yuen, and is said to have been seen in full daylight. It passed near to the stars Te Hwang, Kwei in Pih Tow, Shoo Tse, How Kung, Kow Shin, Teen Choo, San Sze, Leen Tsou, Chung Tse, Toon Hwang, Ta Te, Shung Wei, Ko Tso, Wan Chang, and Shang Tao. On the day Yih Yow it went to the south, and passed through Teen Ho, Toon Yon, Wao Ping, and Teen Yuen. In the 1st moon of the 8th year, on the day Ping Woo, it went towards the group Wao Ping, in 5 D Kwei. It gradually faded, and it was some time before it finally disappeared.

Ching Hwa, 7th year, 1471 12th moon, day Kon Souh, 1472, January 16,
Ke Maou, January 21, Yih Yew, January 27 8th year, 1st moon, day Ping Woo,
1472, February 17

8 D Leu determined by α , β , γ Arietis

8 D Kwei determined by β , δ , ϵ , &c Andromeda, and stars in Pisces

Tse Wei Yuen, space between stars in Leo and Virgo

Tse Wei Yuen, circle of perpetual apparition

Yew She To, η , ν , τ Bootis Toon Toon, σ , τ Virginis Tao Tse, α Leonis

Hing Chin, star in Corona Borealis Tung Kwan, 2567 Leonis

Teen Tseang, ν , θ , κ Bootis

Pih Tow, the seven bright stars in Ursa Major

San Kung, the three stars in the head of Astarion

Tse Yang, γ Ursa Majoris

Teen Hwang Ta Te, Polaris Star To Hwang, β Ursa Minoris

Kwei in Pih Tow, the square in Ursa Major

Shoo Tse, A 3233 Ursa Minoris How Kung, b 3167 Ursa Minoris

Kow Chin, ζ Ursa Minoris Teen Choo, α Ursa Majoris

San Tse, ϕ , σ , &c Ursa Majoris

Teen Leou, ω and small stars in Ursa Major

Chung Tse, λ , μ , Shang Tse, ι , κ Ursa Majoris

Wan Chang, θ , ν , ϕ Ursa Majoris

Shang Wei, star in Camelopardalis, also one in Cepheus

Ko Tsou, ν , ξ , σ , π Cassiopeia

Teen Ho, ϵ , δ , σ , α Arietis Teen Yin, δ , ζ Arietis

Wao Ping, α , δ , ϵ , &c in Pisces Teen Yuen, stars in Corvus

In the reign of Heou Tsung, the 3rd year of the epoch Hung Oho, the 11th moon, day Woo Seh, a comet was seen in the south of Toon Tsan. Its tail pointed to the north east. It passed over the star Jin. It passed through Choo Kow. In the 12th moon, day Woo Shm, being the 1st day of the moon, it entered Ying Shih. On the day Kang Shm it passed into Teen Tsang.

Emperor Heou Tsung and epoch Hung Oho, 1488-1505, 3rd year, 1490
12th moon, day Woo Seh, December 31 days, Woo Shm, 1491, January 10
Kang Shm, January 22

There appears to be an error in the original in the moon. The Supplement to 'M T L' has the 12th moon instead of the 11th, which seems to be correct. Pingid, after Grubel, has the 12th moon, and Biot's computations agree with that moon, but are not consistent with the 11th moon. The 12th moon has, therefore, been employed instead of the 11th in the preceding computations of the dates.

Toon Tan, $\alpha, \beta, \gamma, \delta$ and others in Cygnus

Jin Sing, e, f, g Pegasus

Ying Shih, or S D Shih, determined by α Pegasus and others

Tsen Tsang, $\iota, \eta, \theta, \tau$ Cetus

320

A D 1500 May 8

In the 13th year of the same epoch, 4th moon, day Kea Woo, a comet was seen in Luy Peih Chin. It entered the space between S D Shih and Peih. It gradually lengthened, until it was about 3 cubits in length. It pointed towards Lo Kung and swept Tsau Foo. It passed Tse Wai Yuen. It gradually lessened, and entering Tse Wai Yuen it approached near to Now She. It passed through Shang Shoo. In the 6th moon, day Ting Yew, it disappeared.

Hung Che, 13th year, 1500 4th moon, day Kea Woo, May 8, 6th moon, day Ting Yew, July 10

S D Shih determined by α, β Pegasus, &c

S D Peih determined by γ Pegasus and α Andromeda

Tse Wai Yuen, space between stars in Leo and Virgo

Tse Wai Yuen, circle of perpetual apparition

Luy Peih Chin, small stars in Aquarius and Pisces

Lo Kung, three groups of two stars each in S D Shih (Pegans)

Tsau Foo, δ, ϵ, ζ Cephei

Now She, ψ Draconis

Shang Shoo, A 3687 Draconis

321

A D 1506 July 31

In the reign of the Emperor Woo Tsung, the 1st year of the epoch Ching Tih, 7th moon, day Ke Chow, a star was seen to the west, without the boundary of Tse Wai. It resembled a great ball. Its colour was a bluish white. After some days it had a small tail. It was seen between S D Tan and Tang. It gradually lengthened, and appeared like a bloom, extending in a north westerly direction towards Wan Chang.

Emperor Woo Tsung and epoch Ching Tih, 1506-1521 1st year, 1506 7th moon, day Ke Chow, July 31

Tse Wai, circle of perpetual apparition

S D Tan determined by α, β and others in Orion

S D Tang determined by $\gamma, \epsilon, \lambda, \mu$ and others in Gemini

Wan Chang, θ, ν, ϕ Ursa Majoris

322

A D 1506 August 10

On the day Kang Tse a comet was seen. It was bright, and went to the south-east. It was 3 cubits in length. After 3 days it lengthened to 5 cubits. It swept the upper star of Hea Tse, and entered The Wei Yuen.

1506 7th moon, day Kang Tse, August 10

The Wei Yuen, space between stars in Loo and Vingo

Hea Tse, ν , ξ Ursa Majoris

Possibly the same as the preceding

323

A D 1520 February

In the 15th year of the same epoch, 1st moon, a comet was seen

Ching Tih, 15th year, 1520 1st moon, February

324

A D 1523 July

In the reign of She Tsung, 2nd year of the epoch Kea Tung, the 6th moon, there was a comet in Teen She.

Emperor She Tsung and epoch Kea Tung, 1522-1566 2nd year, 1523 6th moon, July

Teen She, space within Serpens

325

A D 1531 August 5

In the 10th year of the same epoch, the intercalary 6th moon, day Yih Sze, a comet was seen in the east of S D Tung. Its length was about 1 cubit. It swept the first star in Heen Yuen. The tail gradually increased in length. It went on to S D Yih. It was then about 7 cubits in length. It swept Teen Tsun to the north-east. It entered The Wei Yuen and swept Lang Wei. It passed through the degrees of S D Keo, going to the south-east. It swept the second star to the north of S D Kung. It gradually lessened, and after 34 days it disappeared.

Kea Tung, 10th year, 1531 intercalary 6th moon, day Yih Sze, August 5

S D Tung determined by γ , ϵ , λ , &c. Gemmaurum

Yih determined by α and others in Oriole

Kang determined by ι , κ , χ , θ Virgins

Heen Yuen, α and other stars in Loo and Leo Minor

Teen Tsun, ψ Ursa Majoris Lang Wei, Coma Berenices

The Wei Yuen, space between stars in Loo and Vingo

326

A D 1532 September 2

In the 11th year of the same epoch, the 8th moon, day Ke Maou, a comet was seen in the east of S D Tung. It was about a cubit in length. It afterwards went to the north-east. It passed through Teen Tsun. It gradually increased to about 10 cubits.

in length. It swept the star Ohoo in Tao Wei Yuen, and Teon Mun in S D Koo. In the 12th moon, day Koa Souh, after having been visible for 115 days, it disappeared.

Koa Tang, 11th year, 1532. 8th moon, day Ko Maon, September 2, day Koa Souh, December 26.

S D Tang determined by γ , ϵ , λ , μ , &c. Geminorum.

S D Koo determined by Spica and ξ Virginis.

Tao Wei Yuen, space between stars in Leo and Virgo.

Teon Tsin, α and other stars in Cygnus.

Teon Mun, stars between Spica and γ Hydri.

327

A D 1533 July 1

In the 12th year of the same epoch, 6th moon, day Sin Sre, a comet was seen in Woo Ohay. Its length was 5 cubits. It swept Tao Ling and Teon Ta Tseang Kouen. It gradually increased to about 10 cubits. It swept Ko Taou and passed over Tang Shay. In the 8th moon, day Woo Souh, it disappeared.

Koa Tang, 12th year, 1533. 6th moon, day Jin Sro, July 1, 8th moon, day Woo Souh, September 16.

Woo Ohay, α , β , θ , & Auriga and β Tauri.

Teon Ta Tseang Kouen, γ Andromedæ, Triangulum, and stars near.

Ko Taou, ν , ξ , σ , & Cassiopeiæ.

Tang Shay, ω Cygni and stars near in Lacerta, &c.

328

A D 1539 April 30.

In the 18th year of the same epoch, 4th moon, day Kang Souh, a comet was seen. It was about 3 cubits in length. It was bright, and pointed towards the south west. It swept the 8th star of Hoon Yuen. After 10 days it disappeared.

Koa Tang, 18th year, 1539. 4th moon, day Kang Souh, April 30.

Hoon Yuen, α and other stars in Leo and Leo Minor.

329

A D 1554 June 23

In the 33rd year of the same epoch, the 5th moon, day Kwai Hae, a comet was seen near Teon Kouen. It entered Wan Ohang. It came near the star Shuh. It was visible for 27 days, and then disappeared.

Koa Tang, 33rd year, 1554. 5th moon, day Kwai Hae, June 23.

Teon Kouen, δ Ursa Majoris.

Wan Ohang, θ , ν , ϕ Ursa Majoris.

Shuh, α Scorpionis.

330

A D 1556 March 1

In the 35th year of the same epoch, the 1st moon, day Kang Shin, a comet was seen near Tsin Hoon. It was more than a cubit in length. It pointed towards the

south west, and gradually increased in length to about 3 cubits. It swept Tse Wei Yuen, to the north east of Tse Seang. It entered Tse Wei Yuen and came near to Teen Chwang. On the 2nd day of the 4th moon it disappeared.

Kea Tung, 35th year, 1556 1st moon, day Kang Shin, March 1. The 2nd day of the 4th moon, about May 27

Tse Wei Yuen, circle of perpetual apparition

Tse Wei Yuen, space between Leo and Virgo

Tsin Hsen, ψ , χ and others in Virgo

Tse Seang, δ Virginis

Teen Chwang, stars near θ Draconis

331

A D 1557 *October 10*

In the 36th year of the same epoch, 9th moon, day Woo Shin, a comet was seen in Teen Shu Yuen, near Le Sze, to the north west. It remained until the 23rd year of the 10th moon, when it disappeared.

Kea Tung, 36th year, 1557 9th moon, day Woo Shin, October 10

Teen Shu Yuen, space bounded by Serpens

Le Sze, λ Ophiuchi and small stars near

332

A D 1569 *November 9*

In the reign of Muh Tsung, the 3rd year of the epoch Lung King, the 10th moon, day Sin Chow, the 1st day of the moon, a comet was seen in Teen Shu Yuen. It pointed to the north east. On the day Kang Shin it disappeared.

Emperor Muh Tsung and epoch Lung King, 1567-1572 3rd year, 1569

10th moon, day Sin Chow, November 9, Kang Shin, November 28

Teen Shu Yuen, space bounded by Serpens

333

A D 1577 *November 14*

In the reign of Shin Tsung, 5th year of the epoch Wan Le, 10th moon, day Woo Tse, a comet was seen to the south-west. Its colour was a bluish white. Its length was estimated at 10 cubits. Its vapour (tail) was perfectly white. From the δ D Wei and Ke it passed over δ D Tow and New. It approached near to δ D Neu. It was visible for 1 moon, and then disappeared.

Emperor Shin Tsung and epoch Wan Le, 1573-1619 5th year, 1577 10th moon, day Woo Tse, November 14

δ D Wei determined by γ , δ , ϵ in Scorpio

Ke determined by γ , δ , ϵ , & Sagittarii

Tow determined by ζ , τ , σ , & Sagittarii

New determined by α , β , & Capricorni

Neu determined by ϵ , μ , & Aquarii

334

A D 1580 October 1

In the 8th year of the same epoch, 8th moon, day Kang Shin, a comet was seen in the south east. It increased in size a little every night. It passed along Ho Han. It was soon altogether for 70 days, and then disappeared.

Epoch Wan Lo, 8th year, A D 1580 8th moon, day Kang Shin, October 1
Ho Han, the Milky Way

335

A D 1582 May 20

In the 10th year of the same epoch, the 4th moon, day Ping Shin, a comet was seen in the north-west. It resembled a folded piece of dyed silk. The tail pointed to Woo Ohay. It was visible for about 20 days, and then disappeared.

Epoch Wan Lo, 10th year, 1582 4th moon, day Ping Shin, May 20
Woo Ohay, α , β , θ , ι Auriga and β Tauri

336

A D. 1585 October 3

In the 13th year of the same epoch, 9th moon, day Woo Tse, a comet appeared near Yu Lan. It was more than a cubit in length. Each night it went to the east. It gradually lessened, and in the 10th moon, day Kwei Yin, it disappeared.

Wan Lo, 13th year, 1585 9th moon, day Woo Tse, October 3, day Kwei Yow, November 17
Yu Lan, δ , τ , α Aquarii

337

A D 1591 April 3

In the 19th year of the same epoch, the 3rd moon, day Ping Shin, there was a star like a broom in the north-west, about a cubit in length. It passed over S D Wei, Shih, and Peih. Its length was then 2 cubits. In the intercalary 3rd moon, on the day Ping Yin, the 1st day of the moon, it entered S D Lew.

Wan Lo, 19th year, 1591 3rd moon, day Ping Shin, April 3, intercalary 3rd moon, day Ping Yin, April 13

S D Wei determined by α Aquarii, &c

Shih determined by α , β Pegasus and others near

Peih determined by γ Pegasus and α Andromedae

Lew determined by α , β , γ Arietis

338

A D 1593 July 20

In the 21st year of the same epoch, 7th moon, day Yih Maon, a comet was seen in the eastern part of S D Tang. On the day Yih Hao it went the contrary way, entered Tse Wei Yuan, and approached closely to Hwa Kao.

Wan Lo, 21st year, 1593 7th moon, day Yih Mao, July 20, day Yih Hsao,
August 9

S D Tung determined by γ , ϵ , λ , μ , & Geminorum

Tsao Wei Yuen, circle of perpetual apparition

Hwa Kae, small stars in Cassiopeia and Camelopardalis (uncertain)

339

A D 1596 July 26

In the 24th year of the same epoch, 7th moon, day Ting Chow, a comet was seen in the north west. It resembled a round ball. It entered S D Yih. It was about a cubit in length. Its course was towards the north-west.

Wan Lo, 24th year, 1596 7th moon, day Ting Chow, July 26

S D Yih determined by α and other stars in Oriens

340

A D 1607 September 11

In the 35th year of the same epoch, the 8th moon, day Sun Yow, the 1st day of the moon, a comet was seen in the eastern part of S D Tung. It pointed to the south-west. It went slowly to the north-west. On the day Jin Woo it passed from S D Fang into S D Sun and disappeared.

Wan Lo, 35th year, 1607 8th moon, day Sun Yow, September 11, day Jin Woo, October 2

S D Tung determined by γ , ϵ and other stars in Gemini

Fang determined by β , δ and others in Scorpio

Sun determined by Antares and others in Scorpio

341

A D 1618 November 16

In the 46th year of the same epoch, 10th moon, day Yih Chow, a comet appeared in S D Te. Its length was about 10 cubits. It pointed to the south-east. It gradually pointed to the north-west. It swept over the star Tao Yang Shoo. It entered S D Kang, about a degree to the north-west. It swept Pih Tow, the stars Souen and Ke, Wan Chang, and Woo Chay. It passed off Tso Wei Yuen. In the 11th moon, day Kae Shun, it disappeared.

Wan Lo, 46th year, 1618 10th moon, day Yih Chow, November 16, day Kae Shun, December 25

S D Te determined by α , β , γ , & Libris

S D Kang determined by ι , κ , λ , θ Virginis

Tsao Wei Yuen, circle of perpetual apparition

Tao Yang Shoo, χ Ursa Majoris

Pih Tow, the seven bright stars in Ursa Major

Souen, β Ursa Majoris Ke, γ Ursa Majoris

Wan Chang, θ , ν , ϕ Ursa Majoris

Woo Chay, α , β , θ , & Aurigae, and β Tauri.

342

A D 1619 *February*

In the 47th year of the same epoch, 1st moon, a comet was seen in the south-east. Its length was estimated at 100 cubits. Its luminous envelope pointed downwards the end was curved and pointed.

Wan Lo, 47th year, 1619 1st moon, February

343

A D 1639

In the reign of Ohwang Lo, 12th year of the epoch Tsung Ohing, a comet was seen in the degrees of S D Tsan.

Emperor Ohwang Lo and epoch Tsung Ohing, 1628-1644 12th year, 1639
S D Tsan determined by α , β , γ , δ , & Orionis

344

A D 1640 *December 12*

In the 13th year of the same epoch, 10th moon, day Ping Seuh, a comet was seen. Tsung Ohing, 13th year, 1640 10th moon, day Ping Seuh, December 12

THE Observations that follow form a separate section in the 'Sho Ko,' in which they are termed those of Temporary or Strange Stars. Some of these are undoubtedly meteors, and have consequently been omitted here, where there was any reason to believe them comets, or where there was anything particularly interesting relating to them they have been retained. They are all of the Ming dynasty.

345

A D 1376. *June 22*

In the reign of Tao Tsoo, 9th year of the epoch Hung Woo, the 6th moon, day Woo Tsoo, there was a great star resembling a round ball. Its colour was white. It was situated in Teon Tsang. It crossed Wao Ping and Keon Sho. It entered Tao Wei Yuan. It swept Wan Chang and pointed towards Nuy Shoo. It entered into S D Chang. In the 7th moon, day Yih Hao, it disappeared.

Emperor Tao Tsoo and epoch Hung Woo, 1368-1398 9th year, 1376 6th moon, day Woo Tsoo, June 22, 7th moon, day Yih Hao, August 8

S D Chang determined by κ , λ , μ , & Hydor

Teon Tsang, ι , θ , η , in Centus Keon Sho, ν Paser

Tao Wei Yuan, circle of perpetual apparition

Wan Chang, θ , ϕ , ν Ursa Majoris

Teon Shoo, or Nuy Shoo, δ and other small stars in Draco

346

A D 1378 *September 26*

In the 11th year of the same epoch, 9th moon, day Koo Seuh, a star was seen to the north-east, in Woo Ohay. It put forth a tail about 10 cubits in length. It passed

over Nuy Keae It entered Tase Wei Kung It swept the five stars of Pih Kauh It passed over Shaou Tase of Tung Yuen It entered Teen She Yuen, and remained there until the 10th moon, day Ke Wei, when, on account of cloudy weather, it could no longer be seen

Hung Woo, 11th year, 1378 9th moon, day Koa Seuh, September 26, Ke Wei, November 10

Woo Ohay, α , β , & Amigas, and β Tauri

Nuy Keae, τ and others in Ursa Major

Tase Wei Kung, circle of perpetual apparition

Pih Kauh, Polaris, and others near

Shaou Tase, η Draconis

Teen She Yuen, space bounded by Serpens

347

A D. 1385 *October 23*

In the 18th year of the same epoch, 9th moon, day Yin Yow, a comet was seen in Tase Wei Yuen It came very near to Yow Ohih Fa, and passed out by Twan Mun On the day Yih Yow it entered S D Yih Its length was then about 10 cubits In the 10th moon, day Kang Yin, it entered Koon Mun, and swept Teen Moon

Hung Woo, 18th year, 1385 9th moon, day Woo Yin, October 23, Yih Yow, October 30 10th moon, day Kang Yin, November 4

S D Yih determined by α , β and others in Chatai

Tao Wei Yuen, space between stars in Leo and Virgo

Yow Ohih Fa, β Virginis

Twan Mun, space between β and η Virginis

Koon Mun, stars in Hydra, between Chatai and Corvus

Teen Moon, probably stars in Argo Navis

348

A D 1388 *March 29*

In the 21st year of the same epoch, 2nd moon, day Ping Souh, a star appeared in the eastern part of S D Poh

Hung Woo, 1388 2nd moon, day Ping Yin, March 29

S D Poh determined by γ Pegasi and α Andromedae

349

A D 1430 *September 9*

In the reign of Seuen Tsung, the 5th year of epoch Seuen Tih, the 8th moon, day Kang Yin, a star was seen near Nan Ho It resembled a large round ball Its colour was a dark blue It was seen altogether for 26 days, and then disappeared

Imperial Seuen Tsung and epoch Seuen Tih, 1426-1435 5th year, 1430 8th moon, day Kang Yin, September 9

Nan Ho, α , β , & δ Canis Minoris

350

A D 1430 November 14

In the 10th moon of the same year, day Ping Shin, an extraordinary star was seen to the south of Wao Ping. Its course was to the south east. It crossed Teon Tsang and Teon Yu. It was visible for 8 days, and then disappeared.

Souen Tih, 5th year, 1430 10th moon, day Ping Shin, November 14

Wao Ping, δ , ϵ , μ , ν Piscaum

Teon Tsang, ν , θ , η in Cetus

Teon Yu, small stars below Cetus in Fornax

351

A D 1431 January 3

In the 12th moon of the same year, day Ting Hae, a star like a round ball was seen near Kow Yow. Its colour was a yellowish white. It was not bright. After 15 days it disappeared.

1430 12th moon, day Ting Hae 1431, January 3

Kow Yow, μ , ω , &c. Eridani

352

A D 1453 January 4

In the reign of King To, the 3rd year of the epoch King Tao, the 11th moon, day Kwei Wei, there was a star seen in S D Kwei, near Tsoh She Ko. It went very slowly to the west.

King To appears to have been a regent during the captivity of the Emperor Ying Tsung. His rule and epoch King Tao, 1450-1454 3rd year, 1452 11th moon, day Kwei Wei, 1453, January 3

S D Kwei determined by γ , δ , η , θ Cancer

Tsoh She Ko, Piscopo in Cancer

353

A D 1458 December 24

In the reign of Ying Tsung, 2nd year of the epoch Teon Shun, 11th moon, day Kwei Maou, there was a star seen in S D Sing. Its colour was white. It went westward until the day Ping Woo, when its body faded away. Its appearance was like meal, or the refuse of silk. Its place was near Hoon Yuen. On the day Kang Souh it produced a tail $\frac{1}{4}$ th of a cubit in length. It invaded the north west star of Kwan Wei. In the 12th moon, day Jin Souh, it disappeared in the eastern part of S D Tsang.

Emperor Ying Tsung and epoch Teon Shun, 1457-1464 2nd year, 1458 11th moon, day Kwei Maou, December 24, day Ping Woo, December 27, day Kang Souh, December 31 12th moon, day Jin Souh, January 12, 1459

S D Sing determined by σ , τ , &c. Hydæ

S D Tsang determined by γ , ϵ , λ , μ , &c. Geminorum

Hoon Yuen, α , γ and other stars in Leo and Leo Minor

Kwan Wei, λ , μ and other stars in Cancer

354

A D 1461 *June 29*

In the 5th year of the same epoch, 6th moon, day Jin Shun, a star resembling white meal was seen near Tsung Ching, in Teen She Yuen. On the day Yih Wei it changed into a white vapour and disappeared.

Teen Shun, 5th year, 1461 6th moon, day Jin Shun, June 29, day Yih Wei, August 2

Teen She Yuen, space bounded by Serpens

Tsung Ching, β , γ Ophiuchi

355

A D 1462 *June 29*

In the 6th year of the same epoch, 6th moon, day Ping Yin, a star was seen near the star Taih. Its colour was a bluish white. It entered Taze Wei Yuen. It invaded Teen Laou. On the day Kwei Wei it was beneath Chung Tse. Its form gradually faded away.

Teen Shun, 6th year, 1462 6th moon, day Ping Yin, June 29, Kwei Wei, July 16

Taze Wei Yuen, circle of perpetual apparition

Taih, δ Cassiopeia

Teen Laou, ω and others in Ursa Major

Chung Tse, λ , μ Ursa Majoris

356

A D 1491 *January 19*

In the reign of Hsiao Tsung, 3rd year of epoch Hung Ohe, 12th moon, day Ting Sze, a star was seen in Teen She Yuen. It went to the south-east. On the day Woo Shm it was seen beneath Teen Tsang. It gradually went towards S D Peh.

Emperor Hsiao Tsung and epoch Hung Ohe, 1488-1505 3rd year, 1490 12th moon, day Ting Sze, January 19, 1491, Woo Shm, January 30

Teen She Yuen, space bounded by Serpens

Teen Tsang, ι , η , θ , &c Cass

S D Peh determined by γ Pegasi and α Andromedae

357

A D 1495 *January 7*

In the 7th year of the same epoch, 12th moon, day Ping Yin, a star was seen near Teen Keang. It went slowly towards S D Tow until the 8th year, 1st moon, day Kang Seuh, when it entered S D Wei.

Hung Ohe, 7th year, 1494 12th moon, day Ping Yin, January 7, 1495 8th year, 1st moon, day Kang Seuh, 1495, February 20

S D Tow determined by ζ , τ , σ , &c Sagittarii

S D Wei determined by α Aquarii and θ , ϵ Pegasi

Teen Keang, θ and others in Ophiuchus

358

A D 1499 August 16

In the 12th year of the same epoch, 7th moon, day Woo Shin, a star was seen near the star Tsung in Toen Sho Yuen. It entered the eastern boundary of Taze Wei Yuen. It passed Shaou Tiao and Shang Shoo. It touched Taz Taz and How Kung. It passed out of the western boundary near Shaou Foo. It was visible until the 8th moon, day Koo Chow, when it disappeared.

Hung Cho, 12th year, 1499 7th moon, day Woo Shin, August 16, 8th moon, day Koo Chow, September 6

Toen Sho Yuen, space bounded by Serpens

Taz Wei Yuen, circle of perpetual apparition

Ta Taz, γ Ursa Minoris

How Kung, β Ursa Minoris

Shaou Foo, λ Draconis

359

A D 1502 November 28

In the 15th year of the same epoch, 10th moon, day Woo Shin, a star was seen near Toen Maou, in S D Chang. It arrived at S D Yih, and having returned again to Chung, on the day Woo Yin it disappeared.

Hung Cho, 15th year, 1502 10th moon, day Woo Shin, November 28, day Woo Yin, December 8

S D Chang determined by κ , λ , μ , &c Hydra

S D Yih determined by α and others in Crater

Toen Maou, stars in Aigo Navis

360

A D 1521 February 7

In the reign of Woo Tsung, the 16th year of the epoch Chung Tih, the 1st moon, day Koo Yin, the 1st day of the moon, there was a star in the south-east. It resembled a changing flame of fire, of a white colour, and was from 6 to 7 cubits in length. It crossed the heavens from east to west, and was dissipated.

Emperor Woo Tsung and epoch Chung Tih, 1506-1521 16th year, 1521 1st moon, day Koo Yin, February 7

361

A D 1529 February 5

In the reign of Sho Tsung, 8th year of the epoch Koo Tsung, the 1st moon, on the day of Leih Chun, a long star extended across the heavens. The same occurred in the 7th moon.

Emperor Sho Tsung and Koo Tsung, 1522-1566 8th year, 1529 1st moon, day of Leih Chun. Leih Chun is the 31st of the 24 divisions of the year, being that of the beginning of spring. It answers to our February 5 7th moon, August

362

A D 1532 *March 9*

In the 11th year of the same epoch, the 2nd moon, day Jin Woo, a star was seen in the south east. Its colour was a bluish white. It had a tail. After 19 days it disappeared.

Kea Tung, 11th year, 1532 2nd moon, day Jin Woo, March 9

363

A D 1534 *June 12*

In the 13th year of the same epoch, 5th moon, day Ting Maou, the 1st day of the moon, a star was seen in Tung Shay. It passed through Teen Ke and entered Ko Taou. On the 24th day it disappeared.

Kea Tung, 13th year, 1534 5th moon, day Ting Maou, June 12

Tung Shay, stars in Cygnus, Lacerta, and Andromeda

Teen Ke, θ , ρ , σ and others in Andromeda

Ko Taou, ν , ξ , ϵ and others in Cassiopeia

364

A D 1536 *March 24*

In the 15th year of the same epoch, the 3rd moon, day Woo Woo, a star was seen near Teen Kae. It went to the east. It passed through Teen Ohoo to the west. It entered Teen Han, and in the 4th moon, day Jin Shin, it disappeared.

Kea Tung, 15th year, 1536 3rd moon, day Woo Woo, March 24, 4th moon, day Jin Shin, April 27

Teen Kae, β , γ and others in Draco

Teen Ohoo, δ and others in Draco

Teen Han, the Milky Way

365

A D 1545 *December 26*

In the 24th year of the same epoch, the 11th moon, day Jin Woo, a star appeared in Teen Kae. It entered S D Ke. It turned and went to the north-east. At the end of the moon it disappeared.

Kea Tung, 24th year, 1545 11th moon, day Jin Woo, December 26

S D Ke determined by γ , δ , ϵ Sagittarii

Teen Kae, β , γ , δ in Draco

366

A D 1578 *February 22*

In the reign of Shin Tsung, 6th year of epoch Wan Le, 1st moon, day Woo Shin, a great star resembling the Sun appeared in the west, surrounded by a number of stars, all in the west.

Emperor Shin Tsung and epoch Wan Le, 1573-1617 6th year, 1578 1st moon, day Woo Shin, February 22

367

A D 1584 July 1

In the 12th year of the same epoch, 6th moon, day Ke Yew, a star appeared in S D Fang

Wan Lo, 12th year 6th moon, day Ke Yew, July 1, 1584

S D Fang determined by β , δ , π , ρ in Scorpio

368

A D 1604 September 30

In the 32nd year of the same epoch, the 9th moon, day Yih Ohow, a star was seen in the degrees of S D Wei. It resembled a round ball. Its colour was a reddish yellow. It was seen in the south west until the 10th moon, when it was no longer visible. In the 12th moon, day Sin Yow, it again appeared in the south east, in S D Wei. The next year, in the 2nd moon, it gradually faded away. In the 8th moon, day Ting Maou, it disappeared.

Wan Lo, 32nd year, 1604 9th moon, day Yih Ohow, September 30, 10th moon, November, 12th moon, day Sin Yow, 1605, January 14 33rd year, 1605 2nd moon, day Ting Maou, March 21

S D Wei determined by ϵ , μ , ν and others in Scorpio

Biot has S D Fang instead of the second S D Wei. S D Fang is determined by β , δ , π and others in Scorpio. It is, however, Wei in the 'Sho Ke'.

369

A D 1609

In the 37th year of the same epoch a great star was seen in the south west. The tail had four rays.

Wan Lo, 37th year, 1609

370

A D 1618 November 24

In the 46th year of the same epoch, the 9th moon, day Yih Maou, a white vapour was seen in the south east. It was about a cubit in width and 20 cubits in length. It extended from the east to the west of S D Chin. It entered S. D. Yih, and after 19 days it disappeared.

S D Chin determined by β , &c Ori.

Yih, α and others in Orion

371

A D 1618 December 5

In the 11th moon of the same year, day Ping Yin, in the morning, a star like a white flower was seen.

1618 11th moon, day Ping Yin, December 5

372

A D 1621 *May* 12

In the reign of Ho Tsung, the 1st year of the epoch Teen Ke, the 4th moon, day Kwei Yow, a reddish star was seen in the east

Emperor Ho Tsung and epoch Teen Ke, 1621-1627 1st year, 1621 4th moon, day Kwei Yow, May 12

APPENDIX,

CONSISTING OF

TABLES

FOR

REDUCING CHINESE TIME TO EUROPEAN RECKONING,

AND

A CHINESE CELESTIAL ATLAS

Chinese Chronological Tables;

SHOWING

THE SUCCESSION OF THE DYNASTIES AND EMPERORS,

FROM THE EARLIEST PERIOD TO THE PRESENT TIME

*. * These Tables are required for finding the Year of any occurrence. The method of using these and the subsequent Tables is fully explained in the Introductory Remarks

SUCCESSION OF THE DYNASTIES,

FROM THE ACCESSION OF THE HIA TO THAT OF THE PRESENT DYNASTY,
THE T'ING

Dynasties		Date	Dynasties		Date
夏 商 周 東周	Hia	B C 2205	陳	Chin	A D 557
	Shang	1766	隋	Sui	589
	Chow	1122	唐	Tang	618
	Tung Chow	696	後梁	Hou Leang	907
	Tsin	255	後唐	Hou Tang	923
東漢	Han	206	後晉	Hou Tsin	936
	Tung Han	A D 25	後漢	Hou Han	947
東魏	Shih Han	221	後周	Hou Chow	951
	Tsin	265	宋	Sung	960
東晉	Tung Tsin	317	元	Yuen	1280
	Sung	420	明	Ming	1368
齊	Tso	479	清	Tang	1644
	Leang	502			

Chinese Chronology may be arranged under Three Divisions—the Fabulous Period, the Uncertain Period, and that which they consider as certain

THE FABULOUS PERIOD

Emperors Name		Reigned Years
盤古	Pwan Koo	The First Man
天皇氏	Teen Hwang Sho	18,000
地皇氏	To Hwang Sho	18,000
人皇氏	Jun Hwang Sho	45,000

THE UNCERTAIN PERIOD

三皇 SAN HWANG THE THREE HWANGS

Emperors Name		Date	Reigned Years
伏羲	Fuh Ho	3328	115
神農	Shin Nung	3213	140
帝臨	To Lin	3073	80
帝承	To Chung	2993	60
帝明	To Ming	2933	49
帝宜	To E	2884	45
帝來	To Lao	2839	48
帝襄	To Lo	2791	43
帝榆	To Yu	2748	50
皇帝	Hwang To	2698	101

The three Hwangs are Fuh Ho, Shin Nung, and Hwang To

From the 1st year of the 1st epoch, 2637 B.C., being the 60th year of Hwang To, the Chronology is considered as certain

五 帝 WOO TE THE FIVE TH'S
(THE WORDS HWANG AND TH ARE IMPERIAL TITLES)

Emperors Name		Date	Reigned Years
少 昊	Shaou Hsao	2597	84
顓 頊	Chuen Kuh	2513	78
帝 嚳	Te Kwuh	2435	79
帝 堯	Te Yaou	2356	101
帝 舜	To Shun	2255	50

夏 朝 HSA CHIAOU THE HSA DYNASTY, B.C. 2205-1765

大 禹	Ta Yu	2205	8
帝 啟	Te Ke	2197	9
太 康	Tao Kung	2188	29
仲 康	Chung Kang	2159	13
王 相	Wang Seang	2146	28
少 康	Shaou Kang	2118	61
王 杼	Wang Choo	2057	17
王 槐	Wang Hwae	2040	26
王 芒	Wang Mang	2014	18
王 泄	Wang Seo	1996	16
王 不 降	Wang Puh Keang	1980	59
王 扃	Wang Shang	1921	21
王 廑	Wang Kin	1900	21
王 孔 甲	Wang Kung Koa	1879	31
王 廋	Wang Kaou	1848	11
王 發	Wang Fa	1837	19
桀 癸	Koe Kwa	1818	53

商 朝 SHANG CHIAOU

THE SHANG DYNASTY, B C 1766-1122

Emperor's Name		Date	Rigned Years
成湯	Chung Tung	B C 1766	13
太甲	Tao Koa	1753	33
沃丁	Yuh Ting	1730	29
太庚	Tao Kang	1691	25
小甲	Sonou Koa	1666	17
雍己	Yung Ko	1649	12
太戊	Tao Woo	1637	75
仲丁	Chung Ting	1562	13
外壬	Wao Jin	1549	15
河甲	Ho Tan Koa	1534	9
祖乙	Tsao Yih	1525	19
祖辛	Tsao Sin	1506	17
沃甲	Yuh Koa	1490	29
祖丁	Tsao Ting	1465	32
南庚	Nan Kang	1433	25
陽甲	Yang Koa	1408	
盤庚	Pwan Kang	1401	28
小辛	Seacou Sin	1373	21
小乙	Seacou Yih	1352	28
武丁	Woo Ting	1324	59
祖庚	Tsao Kang	1265	7
祖甲	Tsao Koa	1258	33
廩辛	Lan Sin	1225	6
庚丁	Kang Ting	1219	21

Emperor's Name		Date	Reigned Years
武乙	Woo Yih	1198	1
太丁	Tao Ting	1194	3
帝乙	To Yih	1191	37
紂辛	Chou Sin	1154	32

周朝 CHOW CHIAOU

THE CHOW DYNASTY, B.C. 1122-254 868 YEARS

武王	Woo Wang	1122	7
成王	Chung Wang	1115	37
康王	Kang Wang	1078	26
昭王	Chao Wang	1052	51
穆王	Mo Wang	1001	55
共王	King Wang	946	12
懿王	I Wang	934	25
孝王	Hiao Wang	909	15
夷王	I Wang	894	16
厲王	Lo Wang	878	51
宣王	Souen Wang	827	46
幽王	Yow Wang	781	11
平王	Ping Wang	770	51
桓王	Huan Wang	719	23
東周 TUNG CHOW			
莊王	Chwang Wang	696	15
釐王	Lo Wang	681	5

Emperor's Name		Date	Reigned Years
惠王	Hwuy Wang	676	25
襄王	Ssang Wang	651	33
頃王	King Wang	618	6
匡王	Kwang Wang	612	6
定王	Ting Wang	606	21
簡王	Koon Wang	585	14
靈王	Lang Wang	571	27
景王	King Wang	544	25
敬王	King Wang	519	41
元王	Yuen Wang	475	7
貞定王	Ching Ting Wang	468	28
考王	Kaon Wang	440	15
威烈王	Wei Loß Wang	425	24
安王	Gan Wang	401	26
烈王	Loß Wang	375	7
顯王	Hoen Wang	368	48
慎靚王	Shin Tsang Wang	320	6
赧王	Nan Wang	314	59
東周王	Tung Chow Wang	255	7

秦朝 TSIN CHIAU THE Tsin DYNASTY, B.C. 225-205

昭襄王	Shaon Ssang Wang	255	5
孝文王	Haon Wan Wang	250	10
莊襄王	Chwang Ssang Wang	240	4
始皇帝	Cho Hwang To	236	37
二世皇帝	Uih Sho Hwang To	209	3

漢朝 HAN CHIAO HAN DYNASTY, B C 206 to A D 264

西漢 SH HAN WESTERN HAN

Imperial Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
				B.C.		A.D.
高帝	Kao To				12	206 to 193
惠帝	Hui To				7	194 188
高后	Kao Hou				8	187 180
文帝	Wan To		None for 16 yrs	179 to 164		
		後元	Hou Yuan, } 1st epoch }	163 157	23	179 157
景帝	King To		None for 7 yrs	156 150		
		中元	Chung Yuan	149 144		
		後元	Hou Yuan	143 141	16	156 141
武帝	Woo To	建元	Kian Yuan	140 135		
		元光	Yuen Kwang	134 129		
		元朔	Yuen Shih	128 123		
		元狩	Yuen Show	122 117		
		元鼎	Yuen Tung	116 111		
		元封	Yuen Fung	110 105		
		太初	Tao Choo	104 101		
		天漢	Tien Han	100 97		
		太始	Tao Chi	96 93		
		征和	Ching Ho	92 89		
		後元	Hou Yuan	88 87	54	140 87
昭帝	Chao To	始元	Cho Yuan	86 81		
		元鳳	Yuen Fung	80 75		
		元平	Yuen Ping	74	13	86 to 71
宣帝	Hsuan To	本始	Pun Cho	73 to 70		

Emperor's Name		I pooh		Dination of I pooh	Reigned Years	Dination of Reign
元 帝	Yuen To	地 節	To Tacō	69 ^{B D} to 66		
		元 康	Yuen Kang	65 62		
		神 爵	Shm Tsao	61 58		
		五 鳳	Woo Fung	57 54		
		甘 露	Kan Loo	53 50		
		貴 龍	Hwang Lung	49	25	73 to 49
		初 元	Choo Yuen	48 44		
		永 光	Yung Kwang	43 39		
成 帝	Ching To	建 昭	Koen Chaou	38 34		
		竟 寧	King Ning	33	16	48 33
		建 始	Koen Che	31 29		
		河 平	Ho Ping	28 25		
		陽 朔	Yang So	24 21		
		鴻 嘉	Hung Kea	20 17		
		永 始	Yung Cho	16 13		
		元 建	Yuen Yen	12 9		
哀 帝	Gho To	綏 和	Hwan Ho	8 7	26	32 7
		建 平	Kom Ping	6 3		
		元 壽	Yuen Show	2 1	6	6 1
平 帝	Ping To	元 始	Yuen Cho	1 ^{A D} 5	5	1 ^{A D} 5
		孺子嬰	Joo h'o Ying			
王 莽	Wang Mang (Usurper)	居 攝	Ken Che	6 7		
		初 始	Choo Che	8	3	6 8
		廷 國	Kean Kwo	9 13		
淮 陽	Hwao Yang	天 鳳	Tsun Fung	14 19		
		地 皇	To Hwang	20 22	14	9 22
				23 to 24	2	23 to 24

東漢 TUNG HANG EASTERN HAN

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
光武	Kwang Woo	建武	Keen Woo	A.D. 25 to 55		A.D.
		中元	Chung Yuan	56 57	33	25 to 57
明帝	Ming To	永平	Yung Ping	58 75	18	58 75
章帝	Chang To	建初	Keen Choo	76 83		
		元和	Yuen Ho	84 86		
和帝	Ho To	章和	Chang Ho	87 88	13	76 88
		永元	Yung Yuen	89 104		
殤帝	Shang To	元興	Yuen Hing	105	17	89 105
		延平	Yen Ping	106	1	106
安帝	An To	永初	Yung Choo	107 113		
		元初	Yuen Choo	114 119		
		永寧	Yung Ning	120		
		建光	Keen Kwang	121		
順帝	Shun To	延光	Yen Kwang	122 125	19	107 125
		永建	Yung Keen	126 131		
		陽嘉	Yang Koa	132 135		
		永和	Yung Ho	136 141		
		漢安	Han Gan	142 143		
		建康	Keen Kang	144	19	126 to 144
冲帝	Chung To	永嘉	Yung Koa	145	1	145
質帝	Chih To	木初	Pun Choo	146	1	146
桓帝	Huan To	建和	Keen Ho	147 149		
		和平	Ho Ping	150		
		元嘉	Yuen Koa	151 152		
		永興	Yung Hing	153 to 154		

Emperors Name		Epoch		Duration of Epoch	Rigned Years	Duration of Reign
				A D		A D
靈 帝	Lang Ts	永 壽	Yung Show	155 to 157		
		延 熹	Yan Ho	158 166		
		永 康	Yung Kang	167	21	147 to 167
		建 寧	Koen Ning	168 171		
		熹 平	Ho Ping	172 177		
獻 帝	Hoen Ts	光 和	Kwang Ho	178 183		
		中 平	Ohung Ping	184 189	22	168 189
		初 平	Ohoo Ping	190 193		
		興 平	Hing Ping	194 195		
		建 安	Koen Gan	196 220	31	190 220
後 漢 HOW HAN THE LATER HAN						
昭烈帝 後 帝	Chau Lo Ts How Ts	章 武	Chang Woo	221 222	2	221 242
		建 興	Koen Hing	223 237		
		延 熙	Yen He	238 257		
		景 耀	King Taih	258 262		
		炎 興	Yen Hing	263 264	42	223 264
晉 朝 TSIN CHAU THE TSIN DYNASTY, A D 265-419						
西 晉 SE TSIN WESTERN TSIN						
武 帝	Woo Ts	泰 始	Tae Cho	265 274		
		咸 寧	Han Ning	275 279		
		太 康	Tae Kang	280 289	25	265 to 289
		永 熙	Yung He	290		
		元 康	Yuen Kang	291 to 299		
惠 帝	Hway Ts	永 康	Yung Kang	300		

Imperial Name		Epoch		Duration of Epoch		Reigned Years	Duration of Reign	
懷 帝 鳳 帝	Hwao To Min 'to	永 寧	Yung Ning	301		17 6 4	290 to 306 307 312 313 316	
		大 安	Tao Gan	302 to 303				
		永 興	Yung Hing	304 305				
		光 熙	Kwang Ho	306				
		永 嘉	Yung Koa	307 312				
		建 興	Keon Hing	313 316				
東 晉 TUNG 'TSIN EASTERN TSIN								
元 帝	Yuen 'to	建 武	Keon Woo	317		6 3 17 2 17	317 322 323 325 326 342 343 344 345 361	
明 帝 成 帝	Ming 'to Ching To	大 興	Ta Hing	318 321				
		永 昌	Yung Chiang	322				
		太 寧	Tao Ning	323 325				
康 帝 穆 帝	Kang To Muh To	咸 和	Han Ho	326 334				
		咸 康	Han Kang	335 342				
		建 元	Keon Yuen	343 344				
哀 帝	Gao 'to	永 和	Yung Ho	345 356				
		升 平	Shing Ping	357 361				
		隆 和	Lung Ho	362				
帝 昶 簡 文 帝 孝 武 帝	To Yih Keon Wan 'to Hsao Woo 'to	興 寧	Hing Ning	363 365				
		太 和	Tao Ho	366 370				
		咸 安	Han Gan	371 372				
安 帝	Gan To	寧 康	Ning Kang	373 375				
		太 元	Tao Yuen	376 396				
		隆 安	Lung Gan	397 401				
恭 帝	Kung To	元 興	Yuen Hing	402 404				
		義 熙	Yi Ho	405 to 418				
		元 熙	Yuen Ho	419		1	419	

宋朝 SUNG CHIAOU THE SUNG DYNASTY, A D 420-478

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
武帝	Woo To	永初	Yung Choo	420 to 422	3	420 to 422
少帝	Shao To	景平	King Ping	423	1	423
文帝	Wan To	元嘉	Yuan Kea	424 453	30	424 453
孝武帝	Honou Woo To	孝建	Honou Keon	454 456		
		大明	Ta Ming	457 464	11	454 464
廢帝	Fai To	景和	King Ho	465	1 year	465
明帝	Ming To	泰始	Tao Cho	465 471		
		泰豫	Tao Yu	472	8	465 472
蒼梧王	Cwang Woo Wang	元徽	Yuan Hway	473 476	4	473 476
順帝	Shun To	昇明	Shung Ming	477 478	2	477 478

齊朝 TSI CHIAOU THE TSI DYNASTY, A D 479-501

高帝	Kao To	建元	Keon Yuan	479 482	4	479 482
武帝	Woo To	永明	Yung Ming	483 493	11	483 493
明帝	Ming To	建武	Keon Woo	494 497	5	494
		永泰	Yung Tao	498		498
東昏後	Tung Hwan Hou	永元	Yung Yuan	499 500	2	499 to 500
和帝	Ho To	中興	Chung Hing	501	1	501

梁朝 LEANG CHIAOU THE LEANG DYNASTY, A D 502-556

武帝	Woo To	天監	Teen Keon	502 519		
		普通	Tsun Tung	520 526		
		大通	Ta Tung	526 527		
		中大通	Chung Ta Tung	528 to 534		

Emperors' Names		Epoch	Duration of Epoch	Reigned Years	Duration of Reign
簡文帝 元帝 敬帝	Koon Wan To Yuen To King To	大同	Ta Tung	A D 535 to 545	
		中大	Chung Ta Tung	546	
		太清	Tao Tung	547 549	47 502 to 549
		大寶	Ta Paou	550 551	2 550 551
		承聖	Ching Shing	552 554	3 552 554
		紹泰	Shao Tai	555	
		太平	Tai Ping	556	2 555 556

陳朝 CHIN CHIAOU THE CHIN DYNASTY, A D 557-588

武帝	Woo To	永定	Yung Ting	557 559	3	557 559
文帝	Wan To	天嘉	Teen Kaa	560 563		
		天康	Tam Kang	566	7	560 566
伯宗	Pih Tsung	光大	Kwang Ta	567 568		
宣帝	Senon To	大建	Ta Koon	569 582	14	569 582
後王	Hou Wang	至德	Chi Tih	583 586		
		禎明	Ching Ming	587 588	6	583 588

隋朝 SUY CHIAOU THE SUY DYNASTY, A D 589-617

文帝	Wan To	開皇	Kao Hwang	589 600		
		仁壽	Jim Show	601 604	24	589 604
煬帝	Yang To	大業	Ta Nee	605 to 616	13	605 to 616
恭帝	Kung To	義寧	E Ning	617	1	617

唐 朝 TANG CHAOU THE TANG DYNASTY, A.D. 618-906

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
高 祖 太 宗 高 *	Kaou Tsao	武 德	Woo Tih	618 ^A to 626 ^D	9	618 ^A to 626 ^D
	Tao Tsung	貞 觀	Ohng Kwan	627 to 649	23	627 to 649
	Kaou Tsung	永 徽	Yung Hwuy	650 to 655		
		顯 慶	Heen King	656 to 660		
		龍 朔	Lung So	661 to 663		
		麟 德	Lun Tih	664 to 665		
		乾 封	Keen Fung	666 to 667		
		總 章	Tsung Chung	668 to 669		
		咸 亨	Han H'ung	670 to 673		
		上 元	Shang Yuen	674 to 675		
		儀 鳳	Yi Fung	676 to 678		
		調 露	Kao T'uh	679		
		永 隆	Yung Lung	680		
		開 耀	Kao T'uh	681		
		永 淳	Yung Shun	682		
		宏 道	Hung Taon	683	31	650 to 683
中	Chung Tsung	嗣 聖	S'io Shing	684 to 704		
		神 龍	Shun Lung	705 to 706		
		景 龍	King Lung	707 to 709	26	684 to 709
睿	Juy Tsung	景 雲	King Yun	710 to 711		
		太 極	Tao K'eh	712	3	710 to 712
元	Yuen Tsung	開 元	Kao Yuen	713 to 741		
		天 寶	Teen Pao	742 to 755	43	713 to 755
肅	Suh Tsung	至 德	Ché Tih	756 to 757		

* Where the mark | occurs, it must be considered as representing the preceding Chinese character

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
代宗	Tao Tsung	乾元	Kan Yuan	^{A D} 758 to 759		^{A D}
		上元	Shang Yuan	760 761		
		寶應	Paou Ying	762	7	756 to 762
		廣德	Kwang Tih	763 764		
		永泰	Yung Tao	765		
	Tih Tsung	大歷	Ta Loh	766 779	17	763 779
		建中	Koon Chung	780 783		
		興元	Hing Yuan	784		
		貞元	Chung Yuan	785 804	26	780 804
		永貞	Yung Ching	805	1	805
順憲穆敬文	Shun Tsung	元和	Yuen Ho	806 820	15	806 820
	Hoen Tsung	長慶	Chang King	821 824	4	821 824
	Muh Tsung	寶歷	Paou Loh	825 826	2	825 826
	King Tsung	太和	Tao Ho	827 835		
	Wan Tsung	開成	Kao Chung	836 840	14	827 840
	Woo Tsung	會昌	Hway Chang	841 846	6	841 846
	Seuen Tsung	大中	Ta Chung	847 859	13	847 859
	Er Tsung	咸通	Han Tung	860 873	14	860 873
	Ho Tsung	乾符	Kan Foo	874 879		
		廣明	Kwang Ming	880		
武宣懿僖昭		中和	Chung Ho	881 884		
		光啟	Kwang Ko	885 887		
		文德	Wan Tih	888	15	874 to 888
	Chao Tsung	龍紀	Lung Ke	889		
		順紀	Ta Shun	890 891		
		大順	King Fuh	892 to 893		
		景福				

Emperors' Names		Epoch		Duration of Epoch		Reigned Years	Duration of Reign		
				A D			A D		
昭宣帝	Chaou Senan Te	乾寧	Kan Ning	894 to 897		16	889 to 904	905 906	
		光化	Kwang Hwa	898 900					
		天復	Toon Fuh	901 903					
		天祐	Toon Yow	904					
		天祐	Toon Yow	905 906					
五代朝 WOO TAE CHAOU, OR THE FIVE SHORT DYNASTIES, A D 907-960									
後梁 HOW LEANG THE LATER LEANG, A D 907-923									
太祖	Tae Tsao	開平	Kao Ping	907 910		6	907 912	10	913 922
末帝	Muh Te	乾化	Kan Hwa	911 912					
		乾化	Kan Hwa	913 914					
		貞明	Ching Ming	915 920					
		龍德	Lung Tih	921 922					
後唐 HOW TANG THE LATER TANG, A D 923-935									
莊宗	Chwang Tsung	同光	Tung Kwang	923 925		3	923 925	3 months	926 933
明宗	Ming Tsung	天成	Toon Ching	926 929					
愍帝	Mun Te	長興	Chang Hing	930 933					
	廢帝	Fei Te	應順	Yung Shun	934				
		清泰	Tsang Tao	934 935		2	934 935		
後晉 HOW TSIN THE LATER TSIN, A D 936-946									
高祖	Kao Tsao	天福	Tsen Fuh	936 942		7	936 942	4	943 to 946
出帝	Chuh Te	天福	Toon Fuh	943 944					
		開運	Kao Yun	945 to 946					

後漢 HOW HAN, 947-950

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
高祖 隱帝	Kaou Tsao	天福	Teon Fuh	A D 947	1	A D 947
	Yen To	乾祐	Kan Yew	948 to 950	3	948 to 950

後周 HOW CHOW, 951-960

太祖 世宗 恭帝	Tao Tsao	廣順	Kwang Shun	951 953	3	951 953
	Sho Tsung	顯德	Hoen Tih	954 959	6	954 959
	Kung To				1	960

宋朝 SUNG CHIAOU (SECOND) SUNG DYNASTY, A D 960-1279

太祖	Tao Tsao	建隆	Koen Lung	960 962	16	960 975
		乾德	Kan Tih	963 967		
		開寶	Kao Pao	968 975		
		太平興國	Tao Ping Hing Kwo	976 983		
		雍熙	Yung Ho	984 987		
		端拱	Twan Kung	988 989		
太宗	Tao Tsung	淳化	Shun Hwa	990 994	22	976 997
		至道	Che Tsao	995 997		
		咸平	Han Ping	998 1003		
		景德	King Tih	1004 1007		
		大中祥符	Ta Chung Tseang Foo	1008 1016		
		天禧	Toon Ho	1017 1021		
真宗	Ching Tsung	乾興	Kan Hing	1022	25	998 to 1022
		天聖	Teon Shung	1023 1031		
		明道	Ming Taou	1032 to 1033		
仁宗	Jin Tsung					

Emperors Name		Epoch		Duration of Epoch	Rigned Years	Duration of Reign
英宗 神 哲 徽 欽 高 孝 光	Ying Tsung Shun Tsung	景祐	King Yow	A D 1034 to 1037	41	A D 1023 to 1063
		寶元	Paou Yuen	1038 1039		
		康定	Kang Ting	1040		
		慶歷	King Laih	1041 1048		
	Che Tsung	皇祐	Hwang Yow	1049 1053	4	1064 1067
		至和	Ché Ho	1054 1055		
		嘉祐	Koa Yow	1056 1063		
		治平	Ché Ping	1064 1067		
	Hwuy Tsung	熙寧	Ho Ning	1068 1077	18	1068 1085
		元豐	Yuen Lung	1078 1085		
		元祐	Yuen Yow	1086 1093		
		紹聖	Shaou Shing	1094 1097		
	建中靖國 崇寧 大觀 政和 重和 宣和 靖康 建炎 紹興 隆興 乾道 淳熙 紹熙	元符	Yuen Foo	1098 1100	15	1086 1100
		崇寧	Keon Chung Tsing Kwo	1101		
		大觀	Tsung Ning	1102 1106		
		政和	Ta Kwan	1107 1110		
欽 高 孝 光	Kim Tsung Kaou Tsung	重和	Chung Ho	1111 1117	25	1101 1125
		宣和	Chung Ho	1118		
		靖康	E Ho	1119 1125		
		建炎	Tsang Kang	1126		
	Hsiao Tsung	紹興	Keon Yon	1127 1130	36	1127 1162
		隆興	Shaou Hing	1131 1162		
		乾道	Sung Hing	1163 1164		
		淳熙	Kan Taou	1165 1173		
	Kwang Tsung	紹熙	Shun Ho	1174 1189	27	1163 1189
		紹熙	Shaou Ho	1190 to 1194		

Emperors Name		Epoch		Duration of Epoch	Rigned Years	Duration of Reign
泰定帝		泰定	Tae Tung	A D 1324 to 1327		A D
明宗		至和	Cho Ho	1328	5	1324 to 1328
文		天歷	Teen Leih	1328	6	
寧		天歷	Teen Leih	1328 1329		
順帝		至順	Cho Shun	1330 1332	5	1328 1332
		元統	Yuen Tung	1332	1 mo	1332
		至元	Cho Yuen	1333 1334		
		至正	Cho Ching	1335 1340		
				1341 1367	35	1333 1367
明朝 MING CHIAO THE MING DYNASTY, A D 1368-1644						
太祖		洪武	Hung Woo	1368 1398	31	1368 1398
惠帝		建文	Koon Wan	1399 1402	4	1399 1402
成祖		永樂	Yung Lo	1403 1424	22	1403 1424
仁宗		洪熙	Hung Ho	1425	1	1425
宣		宣德	Souen Tih	1426 1435	10	1426 1435
英		正統	Ching Tung	1436 1449	14	1436 1449
景帝		景泰	King Tae	1450 1456	7	1450 1456
英宗		天順	Teen Shun	1457 1468	8	1457 1468
憲		成化	Ching Hwa	1465 1487	23	1465 1487
孝		弘治	Hung Cho	1488 1505	18	1488 1505
武		正德	Ching Tih	1506 1521	16	1506 1521
世		嘉靖	Koa Tung	1522 1566	45	1522 1566
穆		隆慶	Lung King	1567 1572	6	1567 1572
神		萬歷	Wan Leih	1573 to 1619	47	1573 to 1619

* Ying Tsung was taken prisoner by the Tartars in 1450, and restored in 1457, when he changed the epoch to Teen Shun

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
光宗	Kwang Tsung	泰昌	Tao Chang	1620 ^{A D}	1	1620 ^{A D}
熹宗	He Tsung	天啟	Toan Ke	1621 to 1627	7	1621 to 1627
莊烈	Chwang Lee	崇禎	Tsung Chung	1628 1644	17	1628 1644

清朝 TSING CHIAOU THE TSING DYNASTY, A D 1644

世祖	Sho Tsao	順治	Shun Che	1644 1661	18	1644 1661
聖祖	Shin Tsao	康熙	Kang Ho	1662 1722	61	1662 1722
世宗	Sho Tsung	雍正	Yung Chung	1723 1735	13	1723 1735
高宗	Kaon Tsung	乾隆	Keon Lung	1736 1795	60	1736 1795
仁宗	Jin Tsung	嘉慶	Kea King	1796 1820	25	1796 1820
宣宗	Souen Tsung	道光	Taou Kwang	1821 1850	30	1821 1850
——	——	咸豐	Hoon Fung	1851 1862	11	1851 1862
——	——	同治	Tung Che	1863		

THE MINOR DYNASTIES

魏 WEI, A D 220-265

文帝	Wan Te	黃初	Hwang Choo	220 226	7	220 226
明帝	Ming Te	太和	Tao Ho	227 232		
		青龍	Tsing Lung	233 236		
廢帝	Fai Te	景初	King Choo	237 239	13	227 239
		正始	Chung Cho	240 248		
少帝	Shaou Te	嘉平	Kea Ping	249 253	14	240 253
		正元	Chung Yuen	254 255		
		甘露	Kan Loo	256 to 259	6	254 to 259

Emperor's Name		Epoch		Duration of Epoch	Rigned Years	Duration of Reign
末 帝	Mo To	景 元	King Yuon	A D 260 to 263		A D
		威 熙	Han Ho	264 265	6	260 to 265
吳 WOO, A D 221-280						
大 帝	Ta To	黃 武	Hwang Woo	221 228		
		黃 龍	Hwang Lung	229 231		
		嘉 禾	Koa Ho	232 237		
		赤 烏	Chih Nonon	238 250		
		太 元	Tao Yuon	251		
廢 帝	Fai To	神 鳳	Shin Fung	252	31	221 252
		建 興	Koon Hing	253		
		五 鳳	Woo Fung	254 255		
		太 平	Tao Ping	256 257	5	253 257
景 帝	King To	永 安	Yung Gan	258 263	6	258 263
末 帝	Mo To	元 興	Yuon Hing	264		
		甘 露	Kan Loo	265		
		寶 鼎	Paou Tung	266 268		
		趙 衡	Koon Hung	269 271		
		鳳 皇	Fung Hwang	272 274		
		天 冊	Toon Tsh	275		
		天 璽	Toon So	276		
		天 紀	Toon Ko	277 280	17	264 to 280
北 魏 PHU, or NORTHERN WEI						
道 武 帝	Tao Woo To	登 國	Tang Kwo	386 395		
		皇 始	Hwang Ohe	396 to 397		

Emperor's Name		Epoch		Duration of Epoch		Reigned Years	Duration of Reign
明元帝	Ming Yuan To	天興	Toon Hing	398 to 401		23	386 to 408
		天賜	Toan Yang	404 408			
		永興	Yung Hing	409 413			
		神端	Shun T'wan	414 415			
太武帝	Tao Woo To	泰常	Tao Chang	416 423		15	409 423
		始光	Cho Kwang	424 427			
		神䴥	Shun Koa	428 431			
		延和	Yon Ho	432 434			
		太延	Tao Yen	435 439			
		太平	Tao Ping	440 451			
文成帝	Wan Ching To	真君	Chin Koun	440 451		27	416 451
		正平	Ching Ping	452			
		興安	Hing Gan	452 453			
		興光	Hing Kwang	454			
		太安	Tao Gan	455 459			
		和平	Ho Ping	460 465			
獻文帝	Hoon Wan To	天安	Toon Gan	466		5	466 470
孝文帝	Hoon Wan To	皇興	Hwang Hing	467 470			
		延興	Yon Hing	471 475			
		承明	Ching Ming	476			
		太和	Tao Ho	477 499			
宣武帝	Suen Woo To	景明	King Ming	500 503		29	471 499
		正始	Ching Cho	504 507			
		永平	Yung Ping	508 511			
		延昌	Yon Chang	512 to 515			
孝明帝	Hoon Ming To	昭平	Ho Ping	516		16	477 to 515

Emperor's Name		J pooh		Duration of J pooh	Reigned Years	Duration of Reign
				A D		A D
孝莊帝 東海王 節閔帝 安定王 孝武帝		神龜	Shun Kwei	517 to 518		
		正光	Ching Kwang	519 524		
		孝昌	Hsiao Chang	525 527	12	516 to 527
	Hsiao Chwang Te	永安	Yung Gan	528 530	3	528 530
	Tung Hae Wang	建明	Keen Ming	.		1 month
	Tsee Min Te	晉泰	Tan Tao	531	1	531
	Gan Ting Wang	中興	Chung Hing	.		1 month
Hsiao Woo Te	永熙	Yung Ho	532 534	3	532 534	
東魏 TUNG, or EASTERN WEI						
孝靜帝	Hsiao Tung To	天平	Teen Ping	534 537		
		元象	Yuen Seang	538		
		興和	Hing Lo	539 542		
		武定	Woo Ting	543 550	17	534 550
北齊 PIH TSE, or NORTHERN TSE						
文宣帝	Wan Seuen Te	天保	Teen Paon	550 559	10	550 559
	Fai Te	乾明	Keen Ming	.	.	1 month
孝昭帝	Hsiao Chao Te	皇建	Hwang Keen	560	1	560
武成帝	Woo Chung Te	大寧	Ta Ning	561		
		河清	Ho Tung	562 564	4	561 564
後主	How Choo	天統	Toon Tung	565 569		
		武平	Woo Ping	570 to 576	12	565 to 576
幼	Yew Choo	承光	Ching Kwang	577	1	577

後周 HOW OHOW, or LAT-IL OHOW ALSO, PIH OHOW

Imperial Name		I pooh		Duration of I pooh	Reigned Years	Duration of Reign
明 帝 武 帝	Ming To	武 成	Woo Ohing	557 to 560	1	557 to 560
	Woo To	保 定	Paou Ting	561 565		
		天 和	Tien He	566 571		
		建 德	Koan Tih	572 577		
宣 帝 靜 帝	Souon To	宣 政	Souon Ching	578	18	561 578
	Tang To	大 成	Ta Ohing	A few months only		
		大 象	Ta Hoang	579 580	3	579 581
		大 定	Ta Timg	581		

遼 THE LEAOU, A TARTAR DYNASTY

太 祖	Tao Tao	No epoch for the first 9 years		907 915	20	907 926
		神 册	Shin Taih	916 921		
		天 贊	Tien Tsun	922 925		
		天 顯	Tien Hoon	926		
太 宗	Tao Tmuh	天 顯	Tien Hoon	927 937	21	927 947
		會 同	Hwuy Tung	938 946		
		大 同	Ta Tung	947		
		天 祚	Tsun Luh	948 950		
世 宗	Sho Tsung	應 歷	Yung Ioh	951 968	18	951 968
	Muh Tsung	保 寧	Phou Nung	969 978		
	King Tsung	乾 亨	Koon Hany	979 982		
		統 和	Tung Ho	983 1011		
聖 宗	Shung Tsung	開 泰	Kao Tai	1012 1020	49	983 to 1031
		太 平	Tao Ping	1021 to 1031		

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
吳宗 道宗	Hing Tsung	景福	King Fuh	1032	23	1032 to 1054
		重熙	Chun, Ho	1033 to 1054		
		清寧	Tsung Ning	1055 to 1064		
		咸雍	Han Yang	1065 to 1074		
		太康	Tao Kang	1075 to 1084		
天作帝		大安	Ta Gan	1085 to 1094	46	1055 to 1100
		壽隆	Show Lung	1095 to 1100		
	Tsen Tso Lo	乾統	Koon Tung	1101 to 1110		
		天慶	Tsen King	1111 to 1120		
		保大	Paon Ta	1121 to 1125	25	1101 to 1125

金 THE KIN, A TARTAR DYNASTY

太祖 太宗 熙宗 海陵王 世宗 章宗 衛紹王	Tao Tsou	天輔	Toon Foo	1118 to 1123	6	1118 to 1123
	Tao Tsung	天會	Toon Hway	1124 to 1135	12	1124 to 1135
	Ho Tsung	天會	Toon Hway	1136 to 1139		
		天眷	Toon Koon	1140 to 1142		
		皇統	Hwang Tung	1143 to 1151	16	1136 to 1151
	Hao Lung Wang	天德	Toon Tih	1152 to 1155		
		貞元	Ching Yuan	1156 to 1158		
		正隆	Ching Lung	1159 to 1163	12	1152 to 1163
	Sho Tsung	大定	Ta Ting	1164 to 1192	29	1164 to 1192
	King Tsung	明昌	Ming Chang	1193 to 1198		
衛紹王		承安	Ching Gan	1199 to 1203		
	Wei Shaou Wang	泰和	Tao Ho	1204 to 1211	19	1193 to 1211
		大安	Ta Gan	1212 to 1214		

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
宣宗	Sonen Tsung	崇慶	Tsung Kung	1215	5	1212 to 1216
		至寧	Chi Ning	1216		
		貞祐	Ching Yew	1217 1220		
		興定	Hing Ting	1221 1226		
		元光	Yuen Kwang	1227 1228	12	1217 1228
哀	Gao Tsung	正大	Ching Ta	1229 to 1235		
		開興	Kao Hing	1236		
		天興	Tsun Hing	1237		

The preceding Chronological Tables have been compiled from various historical works of repute. Among these it must be observed, that from the Tsun dynasty, B.C. 255, to the present time, the principal authorities which have been employed are the Japanese chronological work mentioned in the Introductory Remarks (p. xv) and a series of eight Chinese rolls in the author's possession, which contain their chronology from the accession of the Tsin to the submission of the Ming dynasty, A.D. 1644. As these rolls, in addition to the whole of the 'Nien Hsiao,' or epochs of the regular dynasties, record those of the principal minor dynasties, and as a collation with the 'Sho Ko' and other esteemed historical annals has proved them to be perfectly trustworthy, they form the chief authority for those epochs, their text being adopted throughout.

These Tables are to be employed for ascertaining the year of any historical or other event of which the date is required. In the early portion, the dates of the dynasty and emperor alone are mentioned, the 'Nien Hsiao,' or Epoch, not having been introduced until about 163 years before the Christian era. From that time, in addition to the above mentioned dates, the year of the epoch is given, and this latter mode is that employed in the major part of the observations of comets in the treatises from which the present translation has been made. In the Chinese historical works, the mode of reckoning by cycles of 60 years is that usually followed.

In Table A will be found the combinations of the Kuo Tzao characters, by which the 60 years of these cycles are expressed, and Table C shows the first year of each of them, from the first, commencing B.C. 2637, to the seventy sixth, which began A.D. 1864. Table A is also employed to express the periods of 60 days into which the Chinese year is divided, and whose appellations are the same as those of the years of the cycle. As this cycle of 60 years, although in constant use in the historical works, is not employed in expressing the dates of most of the cometary observations contained in the present publication, no mention of it occurs among the preceding examples of the

reduction of Chinese time to our reckoning. This opportunity is therefore taken of explaining its use.

To find a given year of the cycle, and to express it in our manner, we must proceed as follows. — The date of the dynasty and of the accession of the Emperor having been ascertained from the Chronological Tables, the date of the first year of the cycle in which that Emperor flourished will appear from Table O, that of the first years of cycles. All that is then needed is to find in the 60-year Table A the combination whose date is required, when the number above it will be that of the year of the cycle represented by that combination, and the corresponding year according to our reckoning can be easily ascertained. For example in the 'Tung Koon Kang Muh' it is recorded, that during the reign of the Emperor Tso Tsung, of the Tang dynasty, in the year of the cycle 'Yih Maou,' an eclipse of the Sun occurred. On reference to the Chronological Tables, the date of the accession of this Emperor will be found to have been A D 763, which year Table O shows to have fallen in the 57th cycle, whose first year was A D 724. In Table A it will be seen that the combination 'Yih Maou' is the 52nd of the cycle, consequently the year required, according to our system, is A D 775.

As respects the ordinary use of these Chronological Tables, the instructions given in p. xvi of the Introductory Remarks will be found amply sufficient.

Tables B and D are those required for finding the characters for the 1st of January in any year, B.C. or A.D. The first of these, B, contains the combinations of the Koo Tso characters necessary to form the 80-year Table, whose construction is explained in the Introductory Remarks, p. xvii, and D is the auxiliary table, showing the first year of each period of 80 years, from B.C. 2561 to A.D. 2000, arranged under the letters B.C. and A.D.

Table E shows the days on which the characters for January 1 occur, both in common and leap years. In Table F will be found the first year of each lunar cycle of 19 years, from B.C. 609 to A.D. 1900, and Table G gives the first day of each moon in every year of this cycle of 19 years. F and G must be considered as approximate only, but they are sufficiently accurate for the purpose required.

The Tables A, B, D, E, F, and G, are those to be employed in finding the moons and days, and as their use is fully explained in the Introductory Remarks, pp. xv-xv, they need no further notice here.

In the Plate marked II will be found the Tables referred to in pp. xxi and xxii of the Introductory Remarks, the first being that of the Tso Ko, or twenty four divisions of the year, and the second that of the twelve Kung, and, it may be observed, it would appear that the names of these latter, not being anywhere described as referring to existing astrisms, as composing them, are to be considered as indicating divisions only, rather than individual groups of stars. It must also be remarked that the modern names, as far as at present has been ascertained, do not occur in any astronomical treatise whose compilation dates before the accession of the present dynasty.

CHINESE CELESTIAL ATLAS

The Twenty Eight Stellar Divisions their determining Asterisms, their Extent North and South and East and West with the three great Spaces

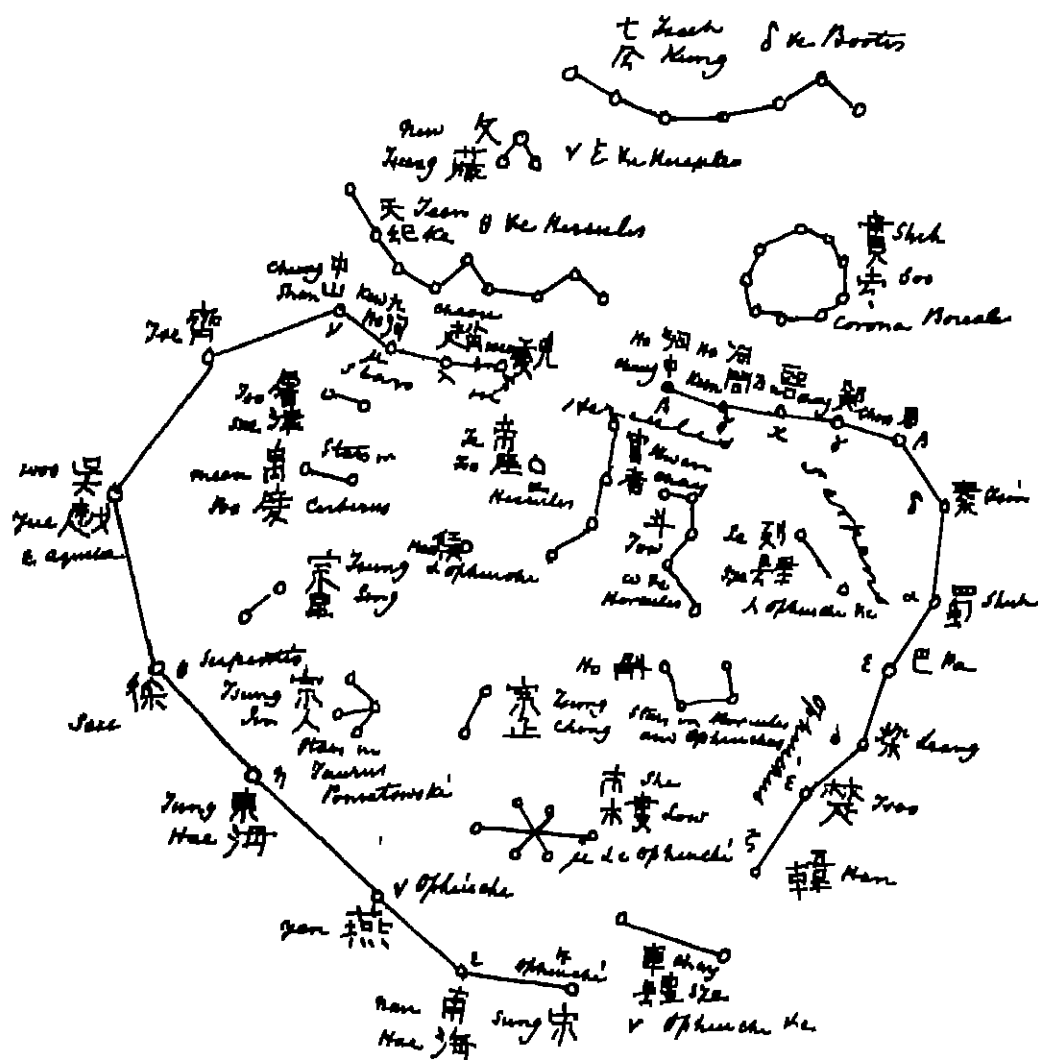
No	Names	Determining Asterisms	Extent N. & S.	Ext. or on the Equator
1	角 Keo	α and β Virgo	corne Perseus to Antares	11° 44'
2	亢 Kang	γ and δ of Virgo	Bootes to Lupus	9° 19'
3	氏 Te	α , β , γ & δ of Libra	Bootes to Lupus	16° 41'
4	房 Fang	β , δ , π , ζ Scorpio	Ophiuchus to Lupus	5° 28'
5	心 Xin	α , τ Scorpio	These and stars near	6° 9'
6	尾 Wei	ϵ , μ , ν Scorpio	δ δ	21° 6'
7	箕 Ke	γ , δ , ϵ & ζ Sagittarii	δ δ	8° 46'
8	斗 Dou	ζ , τ , θ , η & μ Sagittarii	δ δ	24° 34'
9	牛 Niu	α , β & γ Capricorn	Sydra to Capricorn	6° 50'
10	女 Nu	ϵ , μ , ν de Aquarii	Cygnus to Aquarius	11° 7'
11	虚 Xu	β Aquarii and another	Equuleus to Pegasus	8° 41'
12	室 Shi	α Aquarii & β & γ of Pegasus	Cepheus to Pegasus	14° 53'
13	壁 Bi	α , β Pegasus & γ	Cygnus to δ	17° 0'
14	奎 Kui	γ Pegasus & Andromeda	Pegasus to Cassiopeia	10° 25'
15	婁 Lou	β , δ & ϵ Andromeda & α & β in Pegasus	Cassiopeia to Cassiopeia	14° 30'
16	胃 Wei	α , β , γ & δ in Andromeda	Andromeda to Cassiopeia	12° 4'
17	昂 Ang	the 3 stars in Orion	Perseus to Cassiopeia	15° 45'
18	畢 Bi	the Pleiades	Perseus to Eridanus	10° 34'
19	參 Can	α , γ , δ , ϵ & ζ in Orion	Auriga to Eridanus	16° 34'
20	井 Jing	γ and others in Orion	small stars near	- 24'
21	鬼 Gui	α , β , γ , δ & ϵ in Orion	Orion to Lupus	11° 34'
22	奎 Kui	γ , ϵ , λ , μ & ν in Gemini	Perseus to Argos	32° 49'
23	鬼 Gui	γ , δ , ϵ , ζ & θ in Cancer	Cancer to Argos	2° 21'
24	柳 Liu	δ , ϵ , ζ , η & θ in Hydra	Leo to Hydra	12° 14'
25	星 Xing	α , τ & κ in Hydra	Leo minor to Hydra	5° 48'
26	張 Zhang	α , λ , μ & ν in Hydra	Ursa Major to Hydra	17° 19'
27	翼 Yi	α and others in Crater	a few stars near	20° 25'
28	轸 Zhen	β & γ in Corvi	δ δ	15° 30'

紫微垣 Zige Wei'guan The northern circumpolar stars

天市垣 Tian Shi'guan Space bounded by Lupus

太微垣 Tai Wei'guan Space within stars in Leo and Virgo

天 *ten* the space bounded by
市 *she* deepens compressing themselves
垣 *guan* the upper part of of themselves etc



The Twenty Eight Stellar Divisions.

Plate 5

1 角 Kuo

Chow 周 天 小 stars in
Ting 天 田 Coma Messier

天 田 天 田 天 田 天 田
Kuo 天 田 天 田 天 田 天 田

天 田 天 田 天 田 天 田
Kuo 天 田 天 田 天 田 天 田

天 田 天 田 天 田 天 田
Kuo 天 田 天 田 天 田 天 田

天 田 天 田 天 田 天 田
Kuo 天 田 天 田 天 田 天 田

2 亢 K'ang

天 田 天 田 天 田 天 田
K'ang 天 田 天 田 天 田 天 田

天 田 天 田 天 田 天 田
K'ang 天 田 天 田 天 田 天 田

天 田 天 田 天 田 天 田
K'ang 天 田 天 田 天 田 天 田

天 田 天 田 天 田 天 田
K'ang 天 田 天 田 天 田 天 田

3 氐 Di

天 田 天 田 天 田 天 田
Di 天 田 天 田 天 田 天 田

天 田 天 田 天 田 天 田
Di 天 田 天 田 天 田 天 田

天 田 天 田 天 田 天 田
Di 天 田 天 田 天 田 天 田

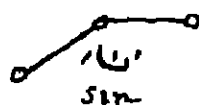
4 房 Fang

天 田 天 田 天 田 天 田
Fang 天 田 天 田 天 田 天 田

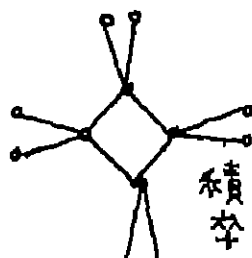
天 田 天 田 天 田 天 田
Fang 天 田 天 田 天 田 天 田

天 田 天 田 天 田 天 田
Fang 天 田 天 田 天 田 天 田

5 心 Sin

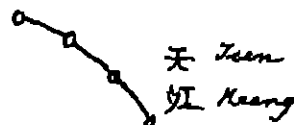


Antares and α + γ Scorpio

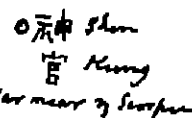
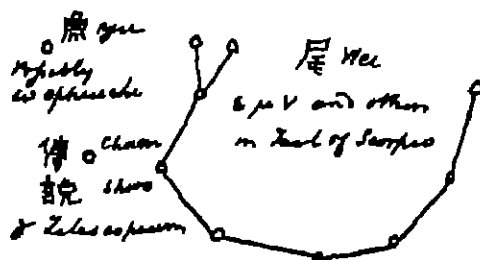


12 small stars in cluster

6 尾 Wei

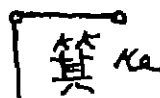


δ and others in Ophiuchus and Sagittarius



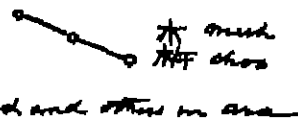
5 stars in area

7 其 Ke



天 Tean
其 Ke
13943 Sagittarius

δ & ϵ Sagittarius and ρ Telas copium

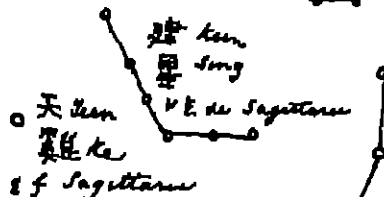


δ and others in area

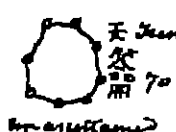
8 斗 Tow



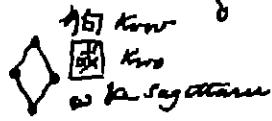
λ & μ in Antares and Section Sobieska



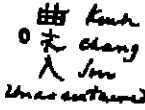
天 Tean
斗 Tow
4 X Sagittarius



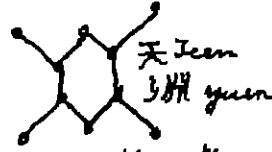
in area



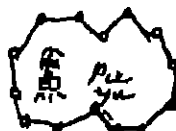
天 Tean
斗 Tow
3 X Sagittarius



天 Tean
斗 Tow
in area

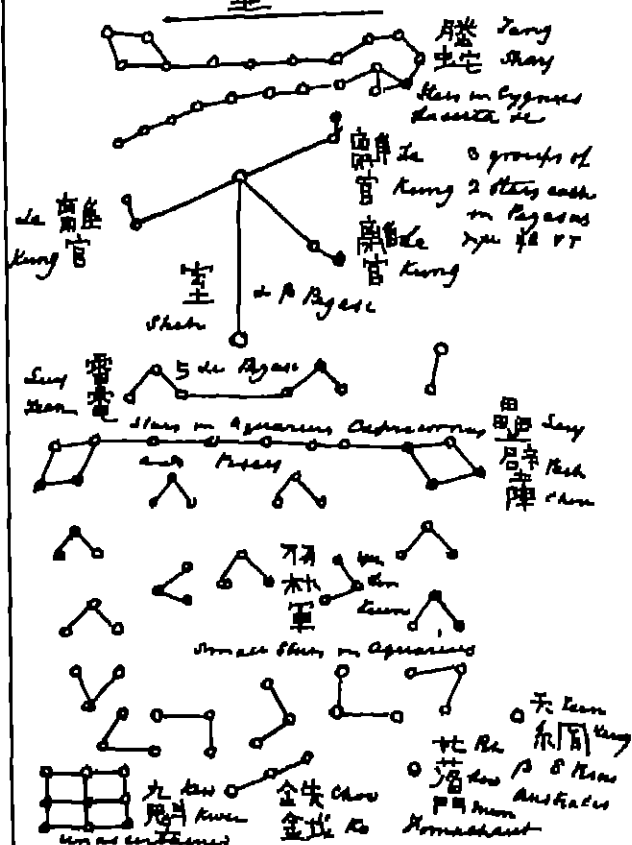


天 Tean
斗 Tow
in area

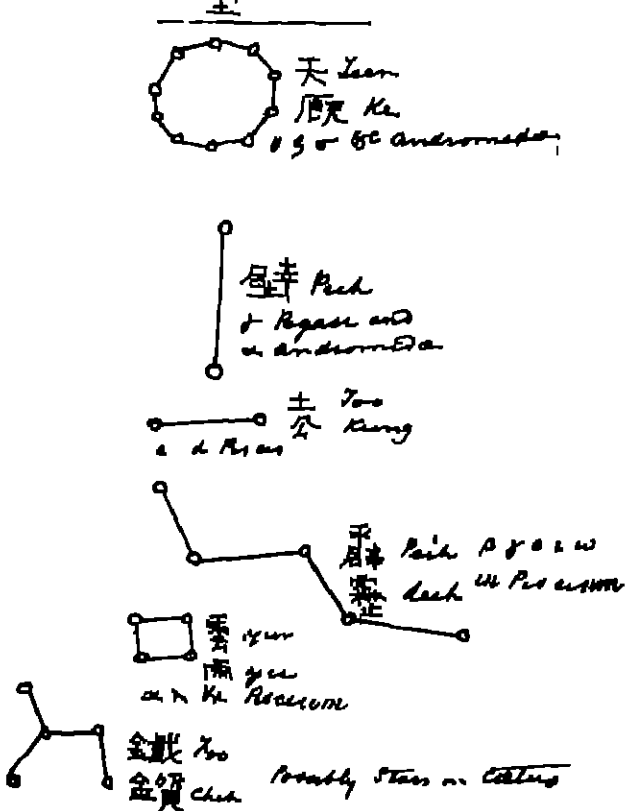


天 Tean
斗 Tow
in area

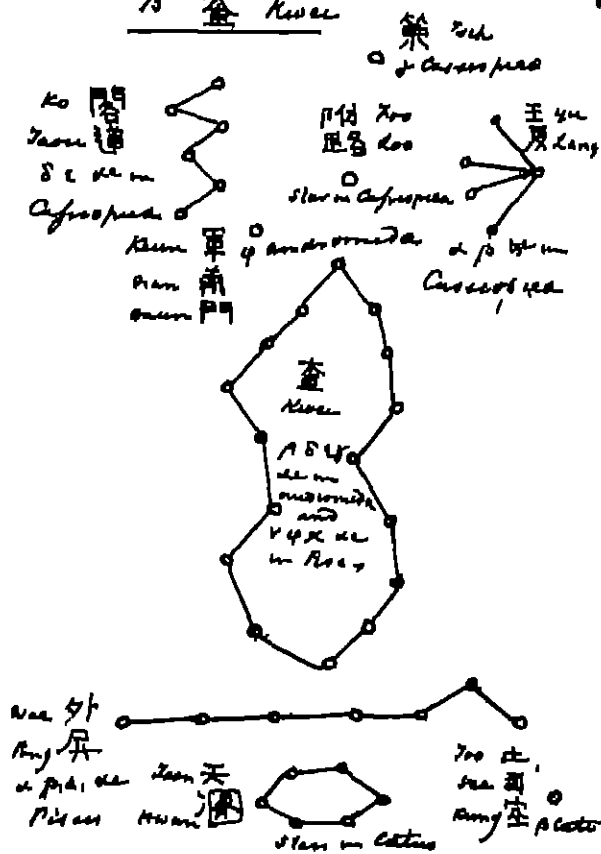
13 室 Shih



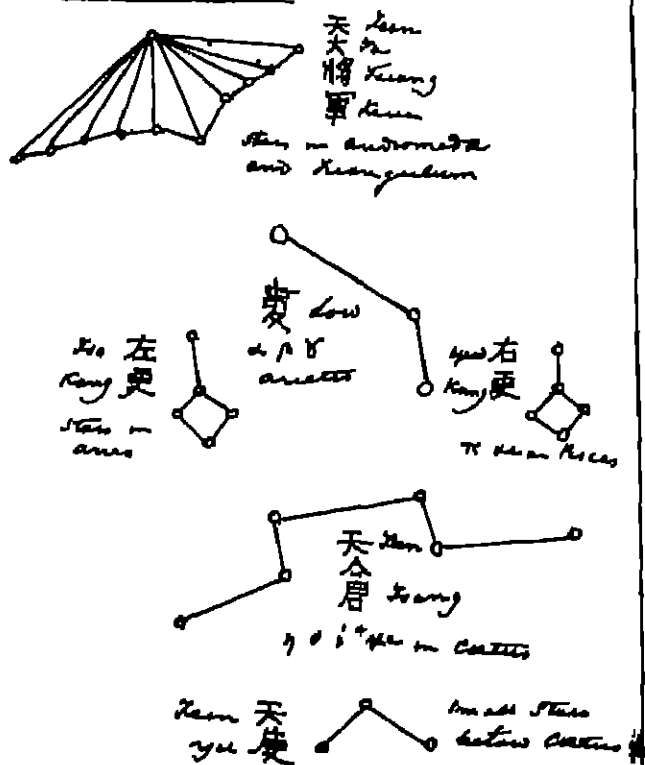
14 辟 Peih



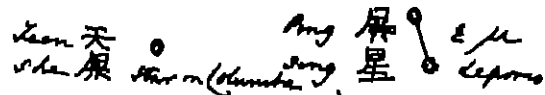
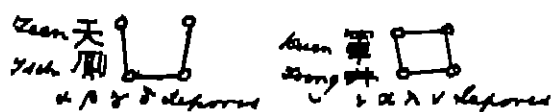
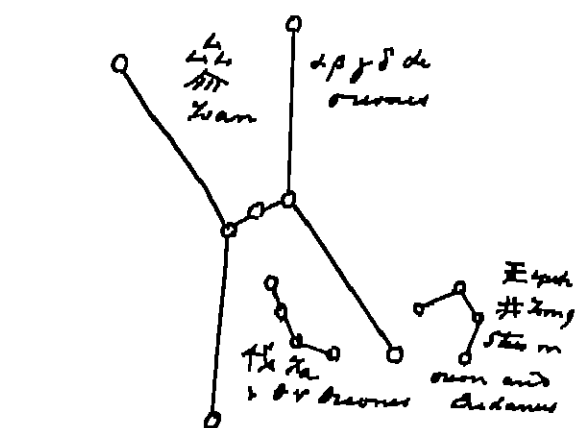
15 奎 Kwei



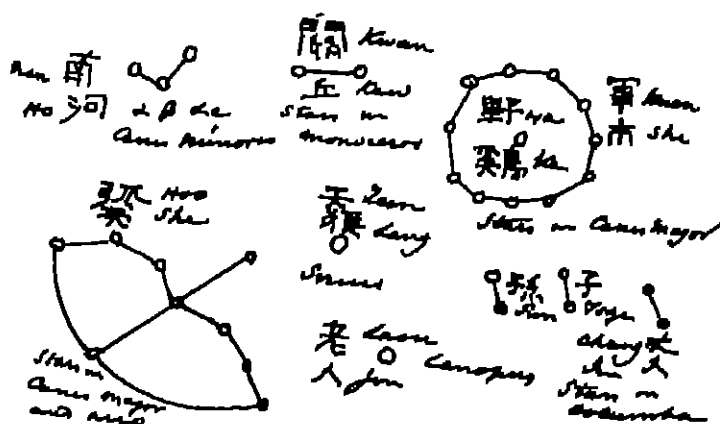
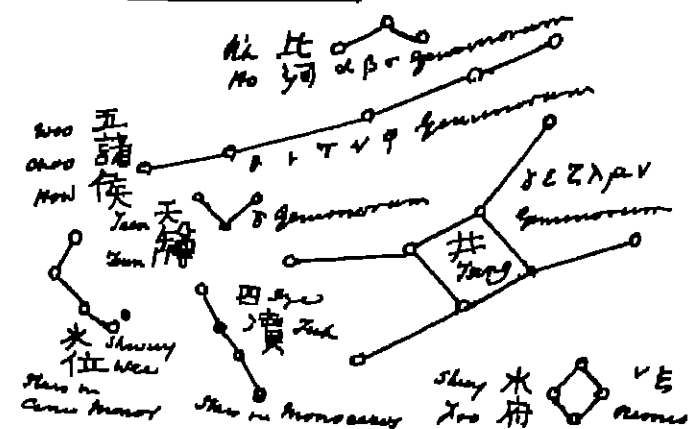
16 婁 Lou



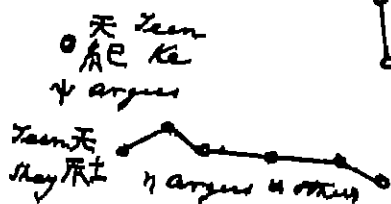
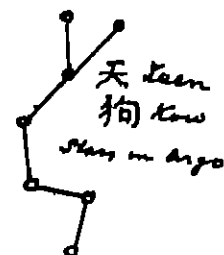
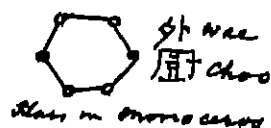
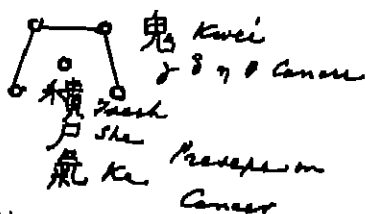
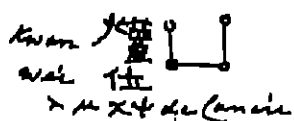
21 44 Tsan.



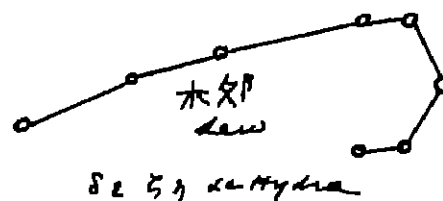
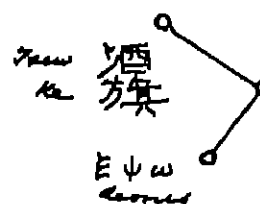
22 # Tung



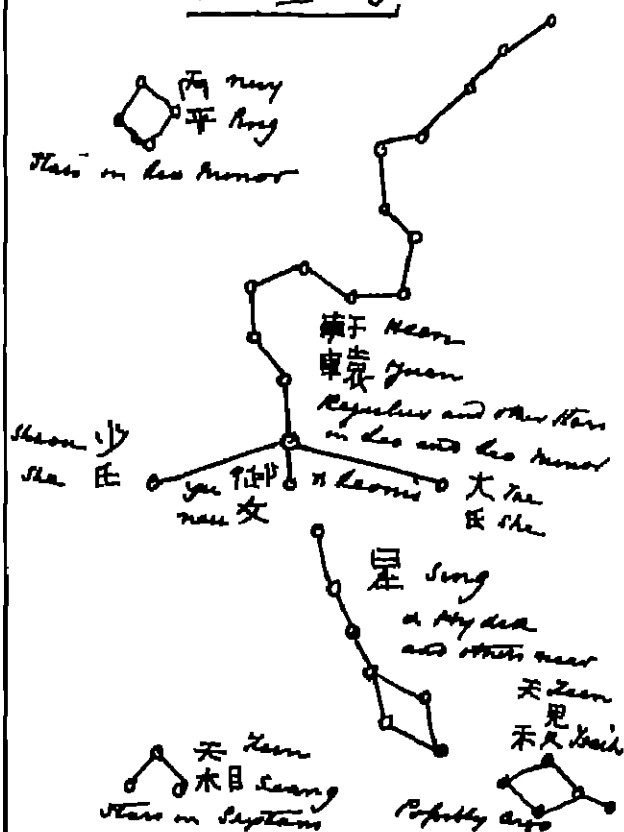
23 鬼 *kwei*



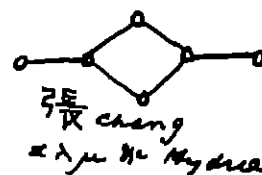
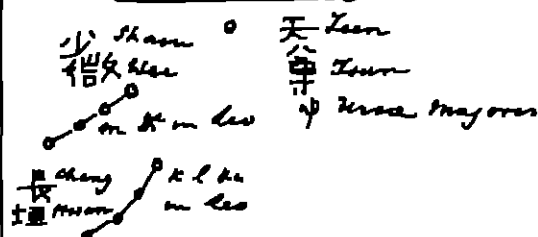
24 木夕 *Law*



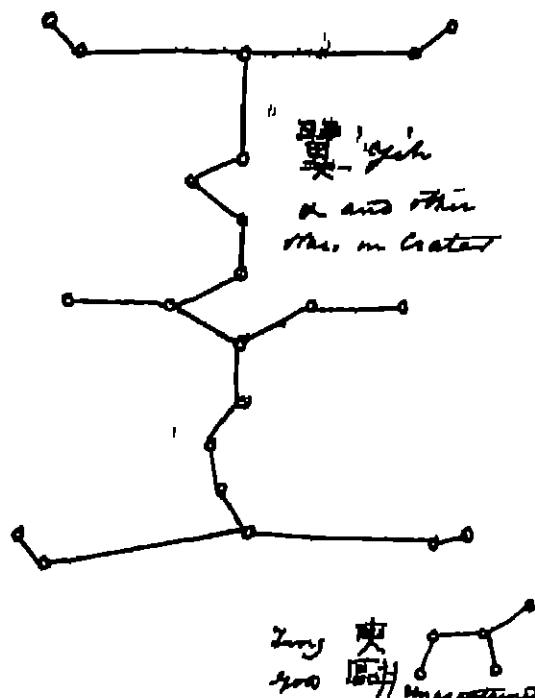
25 星 Song



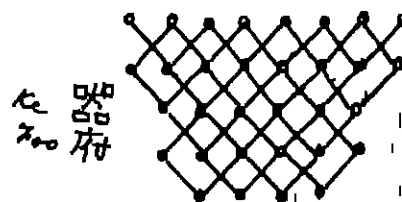
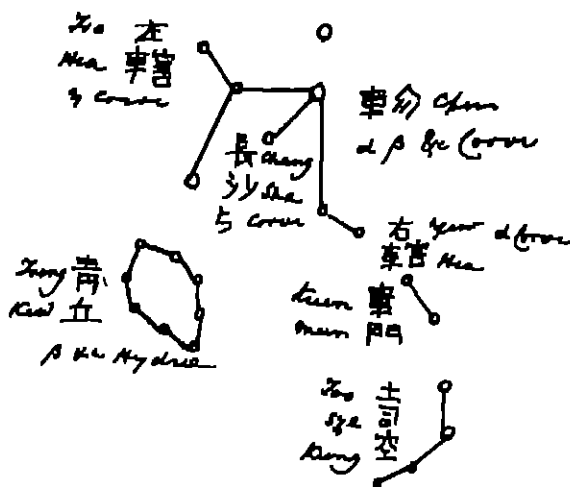
26 張 Chang



27 翼 Yeh



28 車 Chon



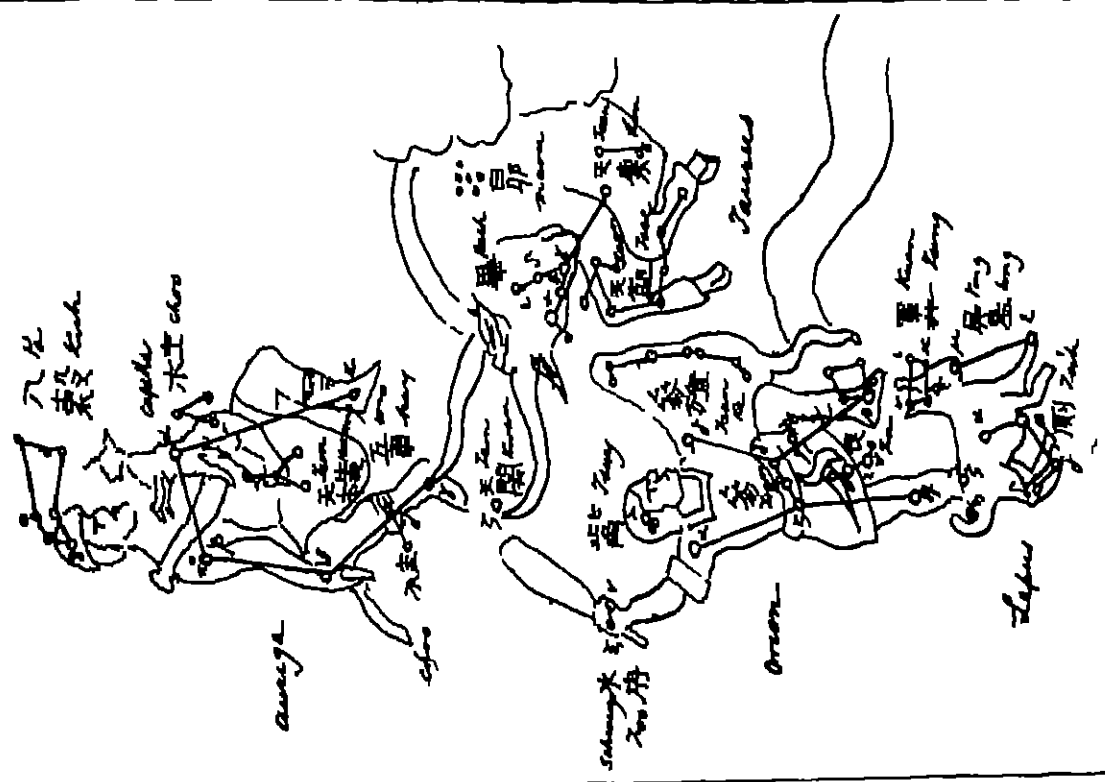
These stars are ascertained

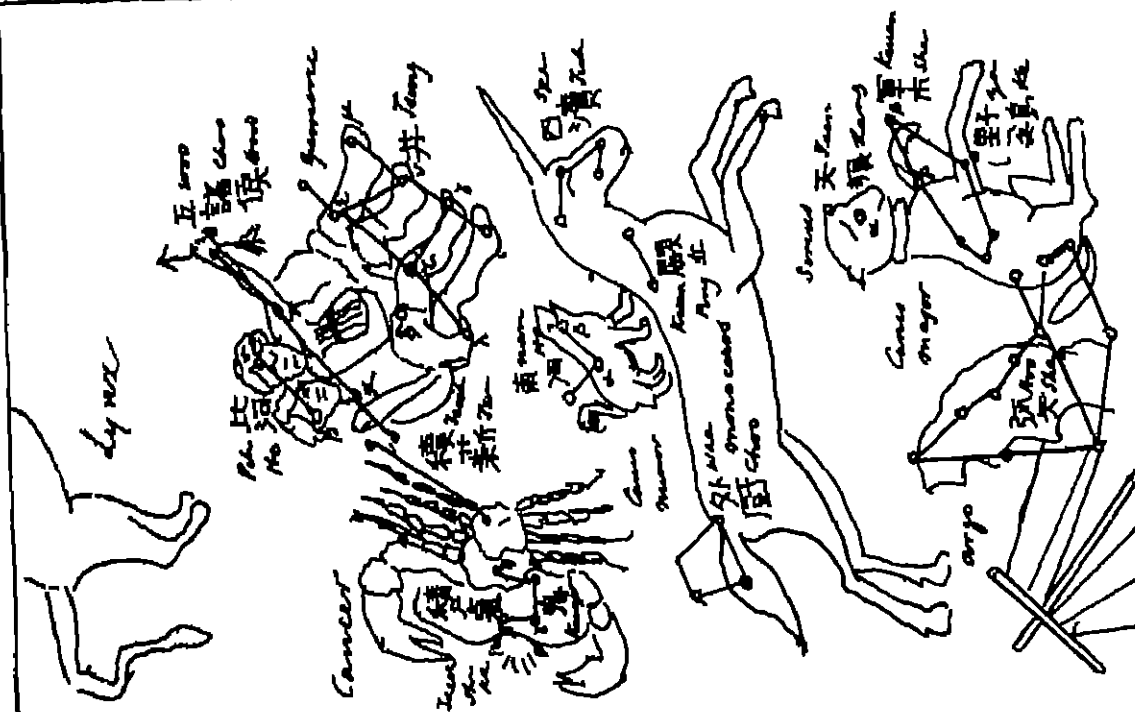
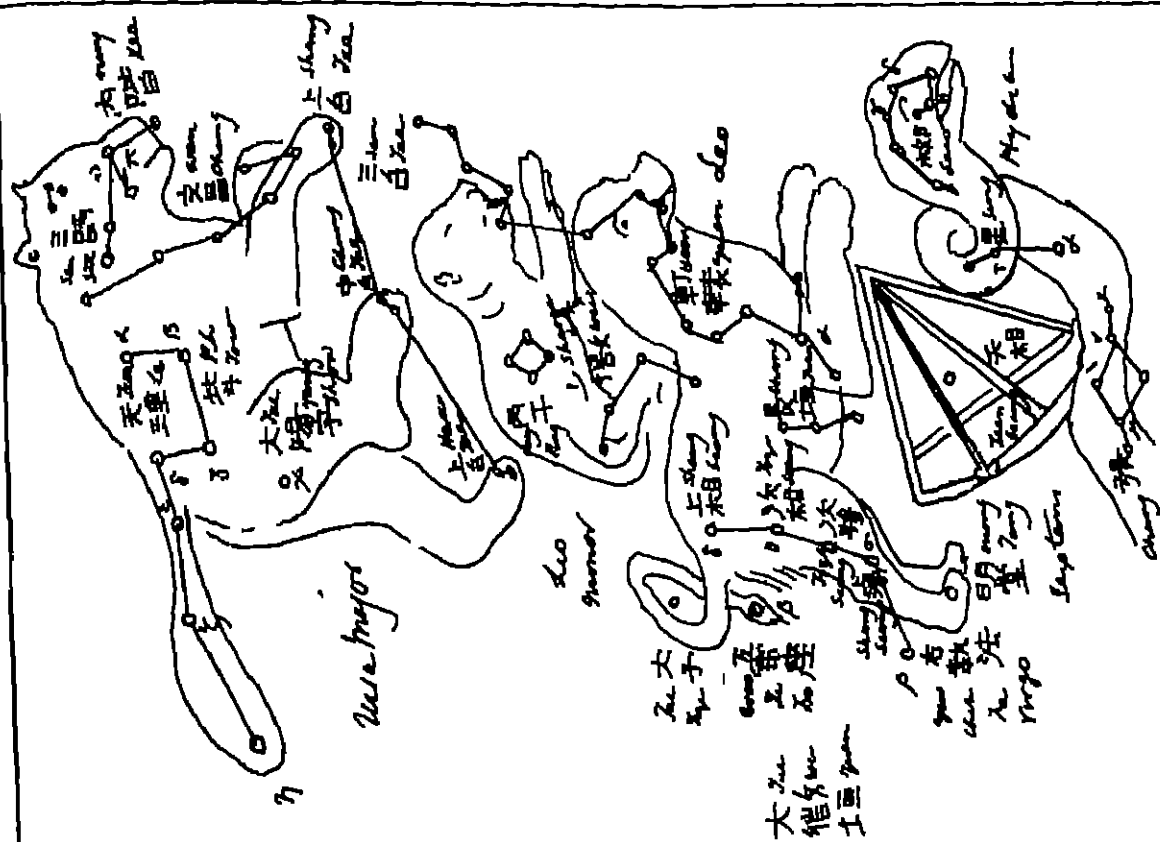
Index to the Asterisms on the preceding Atlas
 The first column of Figures is the number of the Plate, the
 second, that of the Stellar Division on which they occur

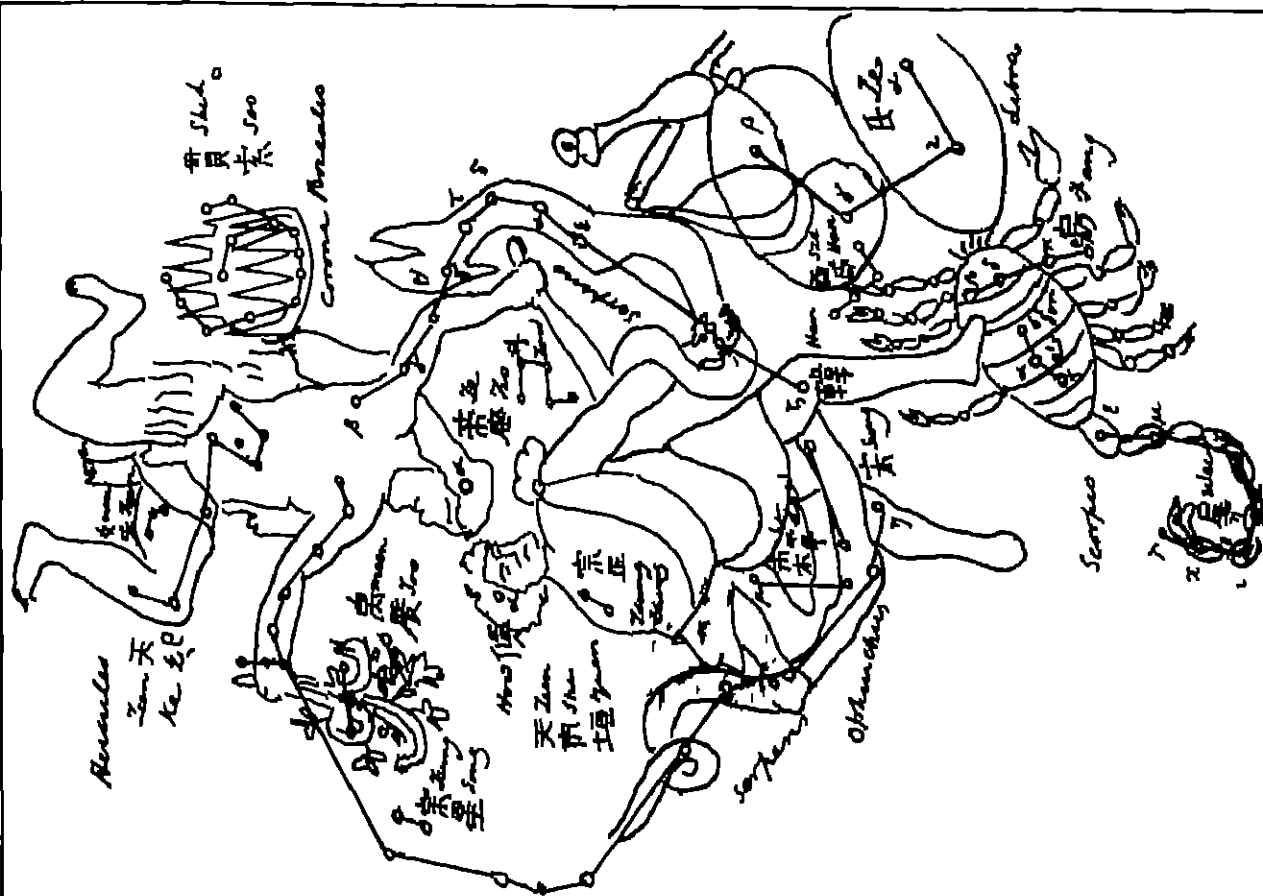
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Chang Chun	4	Heen Lang	7 12	Kow	6 8	han Hae	3
Chang Juan	4	Heen S D	7 11	Kow Chun	2	han Ho	10 22
Chang Hwan	11 26	Ho	3	Kow Kow	6 8	han Anson	5 1
Chang Sun	11 22	Ho Chung	3	Heen Long	10 21	Hean Ching	12
Chang Sha	11 28	Ho Leen	3	Kuh	7 11	Heu Tsang	3
Chau	3	Ho Koo	7 9	Kwa Chau	7 10	Heu S D	7 10
Chau	7 10	Ho Hean	12	Kwan Hae	10 23	Heu She	2
Chau Hae	5 8	Hoo or Hoo She	10 22	Kwan Kow	10 22	Heu S D	7 9
Chay Koo	7 12	Hoo Pan	4	Kwei S D	8 15	Heu Hae	2
Chay Ka	5 3	Hoo	3	Kwei S D	10 23	Heu Hing	4
Chay See	3	Hoo Kung	2	Kwei	6 6	Heu Hing	11 25
Chai Wei	3 2	Hwan Chay	3				
Chun Chay	5 3			Long or Lendang	10 22	Pa	3
Chun Tsang Kuan	5 3	Ion Hing	7 22	Long Tsang	4	Pa Kueh	2
Chun S D	11 28	Loi Hoo	12	Lang Hui	4	Pa Chau	7 10
Chun Hui	7 9			Loan Sun	10 22	Pa Kow	7 11
Chung	3	Kai uh	7 12	Leen or L Cho	12	Pa See	12
Chow	5 1	Kang S D	5 2	Lo Choo	7 10	Peh S D	5 14
Choo	9 19	Kang Cha	5 3	Lo Kung	8 13	Peh S D	9 19
Choo	7 12	Kang Ho	5 3	Lo Shek	9 18	Peh Leek	8 14
Choo Ko	8 13	Ka 12	12	Lo Yee	7 11	Peh Yee	6 8
Choo Sha	2	Ka Chun Tsang Kuan	5 3	Leang	3	Peh Ho	10 21
Chow	3	Ka Chung	7 10	Leang Pa	6 7	Peh Low Mun	8 13
Chow	7 10	Ka Tioo	11 28	Lea Sae	3	Peh Tioo	2
Chow Tong	5 1	Ka Kwan	5 3	Lean Tawn	7 9	Ping	10 21
Chuan Shoo	6 6	Ka S D	6 7	Leid	7 11	Ping Sing	5 1
Chung Yae	4	Hean Peh	12	Leu S D	10 23	Ping Tawn	5 1
Chung Shan	3	Kao S D	5 1	Long Yae	4		
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Ja	5 4	Keuen Sha	9 18	How Tan	7 9	San Kung	2
Pa	10 21	Keuen Han Mun	8 15	Lo Choo Wan	9 19	San Kung	4
Tang S D	5 4	Keuen Mun	11 28	Luh Kua	2	San Fat	4
Pai Yee	12	Keuen She	10 22	Long Peh Chin	8 13	San Hye	2
Too Chak	8 14	Kaw	7 12	Long Tsan	8 13	Seon Hui	12
Too Los	8 15	Kau Choo Chong Yee	9 19			Seang	2
Too Kwang	7 10	Kaw Hwang	4	Ma Koo	12	Se Han	5 4
Too Peh	12	Kaw Ho	3	Ma Wai	12	Seu	3
Tun Ono	7 12	Kaw Hwa	8 13	Ma S D	9 18	Shang Chong	2
		Kaw Juan	7 9	Maen Foo	3	Shang Poo	2
Hae Shan	12	Kaw Yee	9 19	Maen Hing	12	Shang Seang	4
Hae Shek	12	Kaw Yee	12	Mong Tang	4	Shang She	4 1/2
Han	3	Ka Tawn	8 15	Much Hoo	6 7	Shang Hae	2
Han Cha	9 19		2			Shang Tsang	4
Han Tse	4						

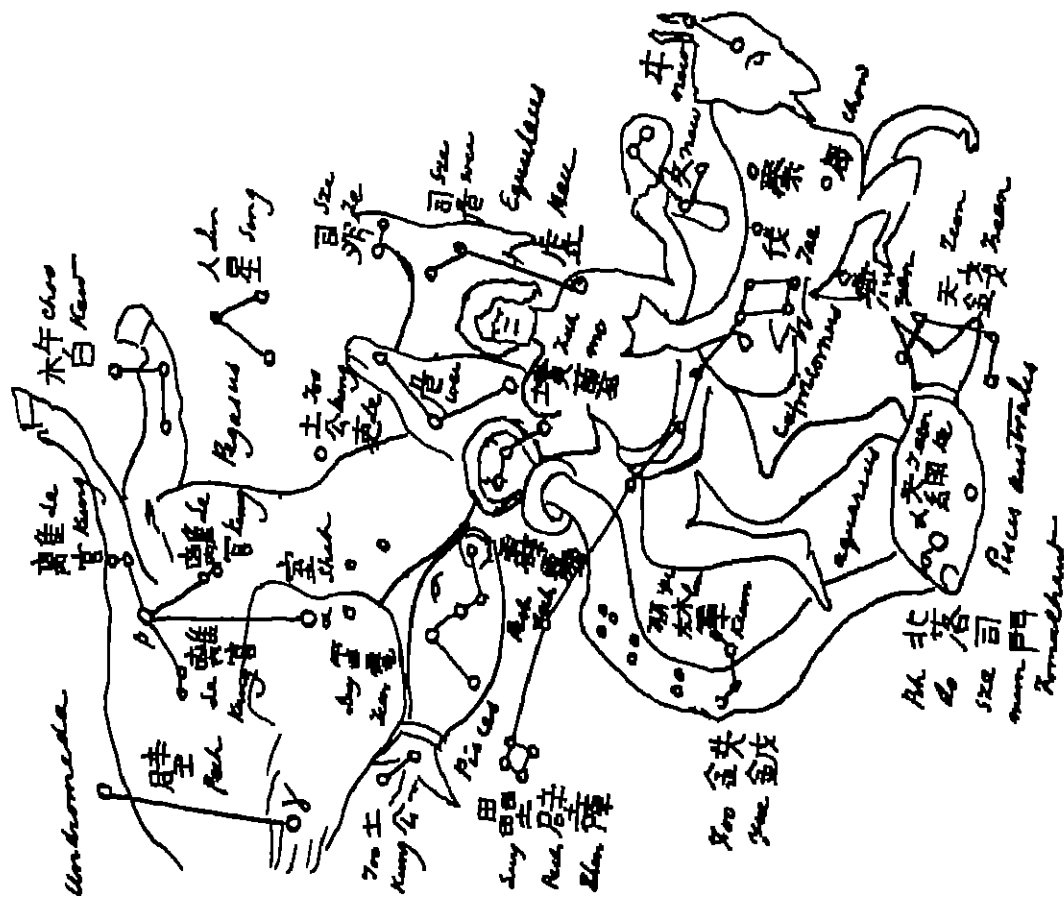
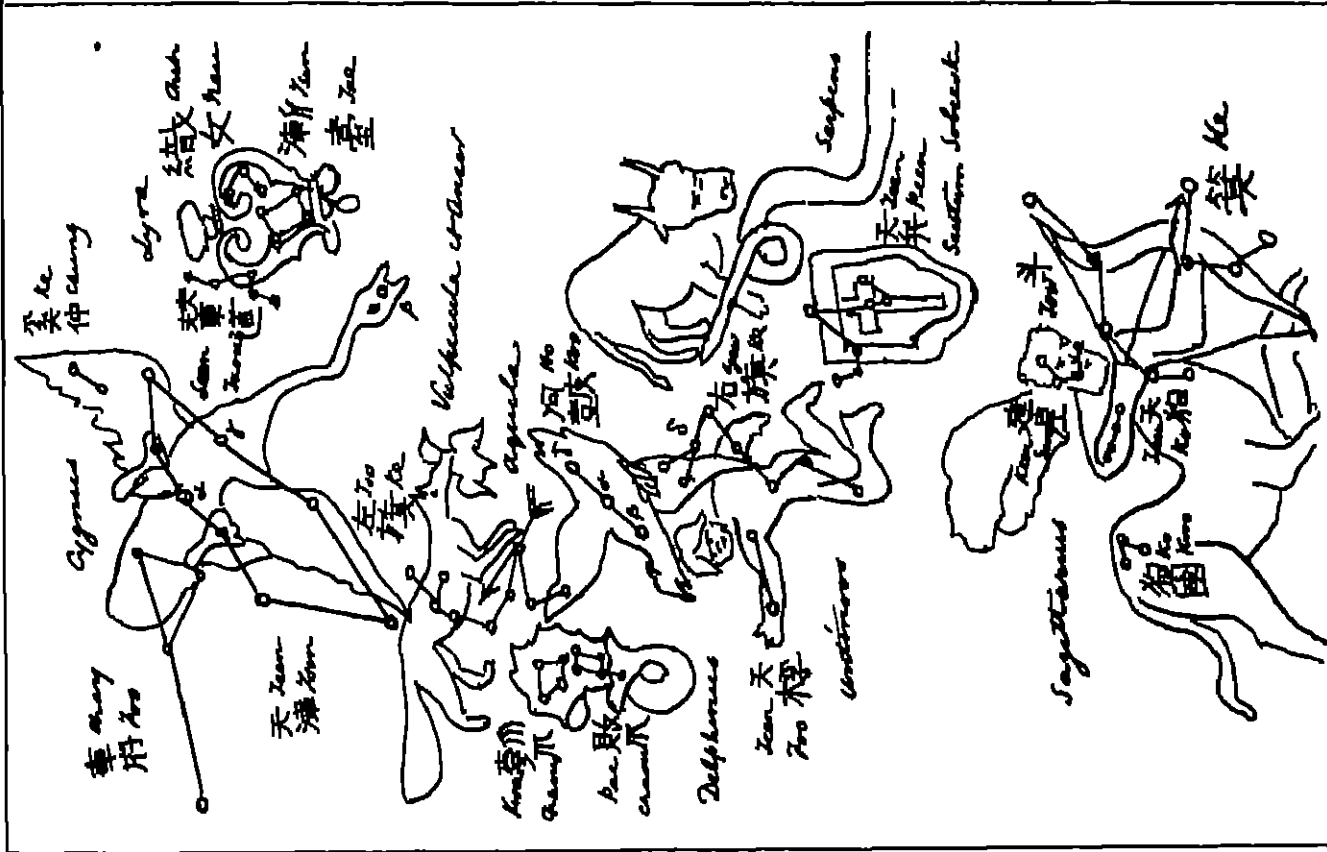
Shang Hae	2	Teen Chuen	9 17	Teen Tseun	7 12	Tice	10	10 22
Shau choy	2	Teen Chuan	2	Teen Tsch	10 21	Tze Sang	4	
Shau Poo	2	Teen Fow	7 9	Teen Yuen	6 8	Tze Tzeung	4	
Shau She	11 25	Teen Kue	5 3	Teen Yuen	9 18	Tung Fow	11 27	
Shau Tse	2	Tee - Heng	5 2	Teen Yuen	9 19	Tung Hae	3	
Shau Hae	2	Tee - Hwan	8 15	Tso Kung	8 16	Tung Han	5 4	
Shau Hae	4	Teen Hwan	9 19	Tso Sze	3			
Shau Hae	11 26	Teen Hwan	2	Tso Sze Kung	8 15	Wae Choo	10 23	
Shay Tsch	12	Teen Ioo	5 3	Tso Sze Kung	11 28	Whe King	8 15	
Shay Shoi	12	Teen Kae	2	Ton	3	Wan Chang	2	
Shay we	12	Teen Lang	8 13	Tow S D	6 8	Wae	3	
Shi Low	3	Teen Kase	9 19	Tranke	9 19	Wai	7 10	
Shih S D	8 13	Teen Ka	3	Tian S D	10 21	Wai	7 10	
Shih Tze Kae	12	Teenka n ka	6 8	Tian Tai	7 9	Wai S D	6 6	
Shin Kung	6 6	Teen Ka	10 23	Tze Ching	4	Woo Chay	10 22	
Shoo Tze	2	Teen Kase	9 19	Tze Fow	7 12	Woo Choo Hui	10 22	
Shush	3	Teen Kung	6 6	Tze	3	Woo Choo Hui	10 22	
Shway Hoi	10 22	Teen Kung	2	Tze Tzeung	4	Woo Choo Hui	10 22	
Shway Hae	12	Teen Kung	10 23	Tsch Ho	6 5	Woo Tze Hui	2	
Shway Hae	10 22	Teen Kung	7 12	Tsch Kung	4	Woo Tze Hui	4	
Sam S D	6 5	Teen Kwan	9 17	Tsch Kung	6 5	Woo Yuen	3	
Sung S D	11 25	Teen Kwan	9 19	Tsch Kung	3	Wai S D	7 12	
Shih Loo	3	Teen Lang	10 22	Tsch Kung	9 17	Wai S D	9 17	
Sun	18 22	Teen Loo	2	Tsch Kung	10 23			
Sung	3	Teen Loo	2	Tsch Kung	9 17	Ya Kue	10 22	
Sze Hae	7 11	Teen Loo	9 17	Tsch Kung	10 24	Yang Mun	5 2	
Sze Ka	7 11	Teen Loo	7 11	Tsch Kung	7 10	Yen	3	
Sze Kwei	9 20	Teen Loo	11 26	Tsch Kung	8 15	Yen	7 10	
Sze Poo	2	Teen Loo	5 1	Tsch Kung	3	Yen	4	
Sze Tuh	10 22	Teen Loo	9 18	Tsch Kung	10 24	Yen	2	
Sze - Hoi	11	Teen Loo	6 8	Tsch Kung	10 24	Yen	11 28	
Sze Ming	7 11	Teen Loo	11 25	Tsch Kung	10 24	Yen	5 6	
Ta Choo	2	Teen Loo	11 23	Tsch Kung	10 24	Yen	9	
Ta Kae	5 1	Teen Loo	10 21	Tsch Kung	10 24	Yen	5 2	
Ta Loe	2	Teen Loo	8 16	Tsch Kung	10 24	Yen	4	
Ta Ling	9 17	Teen Loo	5 7	Tsch Kung	10 24	Yen	4	
Ta Te	2	Teen Loo	9 18	Tsch Kung	10 24	Yen	27	
Tae	7 10	Teen Loo	2	Tsch Kung	10 24	Yen	2	
Tae She	11 25	Teen Loo	9 19	Tsch Kung	10 24	Yen	6 6	
Tae Tze	2	Teen Loo	11 25	Tsch Kung	10 24	Yen	5 13	
Tae Tze	2	Teen Loo	7 10	Tsch Kung	10 24	Yen	11 28	
Tae Tze	4	Teen Loo	10 22	Tsch Kung	10 24	Yen	9 18	
Tang Shay	8 13	Teen Loo	11 26	Tsch Kung	10 24	Yen	8 15	
Ta Tze	3	Teen Loo	2	Tsch Kung	10 24	Yen	10 21	
Ta Tze	5 3	Teen Loo	9 18	Tsch Kung	10 24	Yen	10 21	
Ta Tze	5 3	Teen Loo	6 8	Tsch Kung	10 24	Yen	10 21	
Teen Choo	2	Teen Loo	8 16	Tsch Kung	10 24	Yen	10 21	

Reduced Copies of the Figures in Hamster's Atlas with the principal Chinese characters laid down on the corresponding stars









1 丑丁 ¹⁴ Jing chow	21 戌壬 ³⁹ Sin Sanch	41 未丁 ⁴⁴ Jing Wei	61 辰壬 ²⁹ Sin Shen
2 午壬 ¹⁹ Sin Woo	22 卯丁 ⁴ Jing Maan	42 子壬 ⁴⁹ Sin Tsee	62 酉丁 ³⁴ Jing Yau
3 亥丁 ²⁴ Jing Hae	23 申壬 ⁹ Sin Shen	43 巳丁 ⁵⁴ Jing Sze	63 寅壬 ³⁹ Sin Yim
4 辰壬 ²⁹ Sin Shen	24 丑丁 ¹⁴ Jing Chow	44 戌壬 ⁵⁹ Sin Sanch	64 未丁 ⁴⁴ Jing Wei
5 戌戌 ⁵⁵ Woo Sanch	25 未癸 ²⁰ Kuei Wei	45 辰戌 ⁵ Woo Shen	65 丑癸 ⁵⁰ Kuei Chow
6 卯癸 ⁴⁰ Kuei Maan	26 子戌 ²⁵ Woo Tsee	46 酉癸 ¹⁰ Kuei Yau	66 午戌 ⁵⁵ Woo Woo
7 申戌 ⁴⁵ Woo Shen	27 巳癸 ³⁰ Kuei Sze	47 寅戌 ¹⁵ Woo Yim	67 亥癸 ⁶⁰ Kuei Hae
8 丑癸 ⁵⁰ Kuei Chow	28 戌戌 ³⁵ Woo Sanch	48 未癸 ²⁰ Kuei Wei	68 辰戌 ⁵ Woo Shen
9 未巳 ⁵⁶ Kuei Wei	29 辰甲 ⁴¹ Kuei Shen	49 丑巳 ²⁶ Kuei Chow	69 戌甲 ¹¹ Kuei Sanch
10 子甲 ¹ Kuei Tsee	30 酉巳 ⁴⁶ Kuei Yau	50 午甲 ³¹ Kuei Woo	70 卯巳 ¹⁶ Kuei Maan
11 巳巳 ⁶ Kuei Sze	31 寅甲 ⁵¹ Kuei Yim	51 亥巳 ³⁶ Kuei Hae	71 申甲 ²¹ Kuei Shen
12 戌甲 ¹¹ Kuei Sanch	32 未巳 ⁵⁶ Kuei Wei	52 辰甲 ⁴¹ Kuei Shen	72 丑巳 ²⁶ Kuei Chow
13 辰庚 ¹⁷ Kang Shen	33 丑乙 ² Yeh Chow	53 戌庚 ⁴⁷ Kang Sanch	73 未乙 ³² Yeh Wei
14 酉乙 ²² Yeh Yau	34 午庚 ⁷ Kang Woo	54 卯乙 ⁵² Yeh Maan	74 子庚 ³⁷ Kang Tsee
15 寅庚 ²⁷ Kang Yim	35 亥乙 ¹² Yeh Hae	55 申庚 ⁶⁷ Kang Shen	75 巳乙 ⁴² Yeh Sze
16 未乙 ³² Yeh Wei	36 辰庚 ¹⁷ Kang Shen	56 丑乙 ² Yeh Chow	76 戌庚 ⁴⁷ Kang Sanch
17 丑辛 ³⁸ Sin Chow	37 戌丙 ²³ Ping Sanch	57 未辛 ⁸ Sin Wei	77 辰丙 ⁵³ Ping Shen
18 午丙 ⁴³ Ping Woo	38 卯辛 ²⁸ Sin Maan	58 子丙 ¹³ Ping Tsee	78 酉辛 ⁵⁸ Sin Yau
19 亥辛 ⁴⁸ Sin Hae	39 申丙 ³³ Ping Shen	59 巳辛 ¹⁸ Sin Sze	79 寅丙 ³ Ping Yim
20 辰丙 ⁵³ Ping Shen	40 丑辛 ³⁸ Sin Chow	60 戌丙 ²³ Ping Sanch	80 未辛 ⁸ Sin Wei
			81 丑丁 ¹⁴ Jing Chow

The 80-year Table for finding the Characters for the 1st of January in any year B.C. and A.D.

The Hea Tzee Characters

癸 壬 辛 庚 巳 辰 丁 丙 乙 甲
 Kwei Sin Sin Kang Ka Woo Ting Ping Yeh Kwa
 亥 戌 酉 申 未 午 巳 辰 卯 寅 丑 子
 Hea Sank Yau Shin Wae Woo Sze Shin Maau Yau Chou Tzee

1

The Combinations of the Hea Tzee Characters forming the Cycle of sixty years or the periods of sixty days

51 寅甲 Kwa yon	41 辰甲 Kwa Shin	31 午甲 Kwa Woo	21 申甲 Kwa Shin	11 戌甲 Kwa Sank	1 子甲 Kwa Tzee
52 卯乙 Yeh Maau	42 巳乙 Yeh Sze	32 未乙 Yeh Wei	22 酉乙 Yeh Yau	12 亥乙 Yeh Hea	2 丑乙 Yeh Chou
53 辰丙 Ping Sin	43 午丙 Ping Woo	33 申丙 Ping Shin	23 戌丙 Ping Sank	13 子丙 Ping Tzee	3 寅丙 Ping Yon
54 巳丁 Ting Sze	44 未丁 Ting Wae	34 酉丁 Ting Yau	24 亥丁 Ting Hea	14 丑丁 Ting Chou	4 卯丁 Ting Maau
55 午戊 Woo Woo	45 申戊 Woo Shin	35 戌戊 Woo Sank	25 子戊 Woo Tzee	15 寅戊 Woo Yon	5 辰戊 Woo Shin
56 未巳 Ka Sze	46 酉巳 Ka Yau	36 亥巳 Ka Hea	26 丑巳 Ka Chou	16 卯巳 Ka Maau	6 巳巳 Ka Sze
57 申庚 Kang Shin	47 戌庚 Kang Sank	37 子庚 Kang Tzee	27 寅庚 Kang Yon	17 辰庚 Kang Shin	7 午庚 Kang Woo
58 酉辛 Sin Yau	48 亥辛 Sin Hea	38 丑辛 Sin Chou	28 卯辛 Sin Maau	18 巳辛 Sin Sze	8 未辛 Sin Wae
59 戌壬 Sin Sank	49 子壬 Sin Tzee	39 寅壬 Sin Yon	29 辰壬 Sin Shin	19 午壬 Sin Woo	9 申壬 Sin Shin
60 亥癸 Kwei Hea	50 丑癸 Kwei Chou	40 卯癸 Kwei Maau	30 巳癸 Kwei Sze	20 未癸 Kwei Wae	10 酉癸 Kwei Yau

C

The first year of each cycle of 69 years, from B.C. 2637 to A.D. 1864

I	B.C. 2637	XIV	1857	XXVII	1077	XL	297	LIII	484	LXVI	1264
II	2577	XV	1797	XXVIII	1017	XLI	237	LIV	544	LXVII	1324
III	2517	XVI	1737	XXIX	957	XLII	177	LV	604	LXVIII	1384
IV	2457	XVII	1677	XXX	897	XLIII	117	LVI	664	LXIX	1444
V	2397	XVIII	1617	XXXI	837	XLIV	57	LVII	724	LXX	1504
VI	2337	XIX	1557	XXXII	777	XLV	^{A.D.} -4	LVIII	784	LXXI	1564
VII	2277	XX	1497	XXXIII	717	XLVI	64	LIX	844	LXXII	1624
VIII	2217	XXI	1437	XXXIV	657	XLVII	124	LX	904	LXXIII	1684
IX	2157	XXII	1377	XXXV	597	XLVIII	184	LXI	964	LXXIV	1744
X	2097	XXIII	1317	XXXVI	537	XLIX	244	LXII	1024	LXXV	1804
XI	2037	XXIV	1257	XXXVII	477	L	304	LXIII	1084	LXXVI	1864
XII	1977	XXV	1197	XXXVIII	417	LI	364	LXIV	1144		
XIII	1917	XXVI	1137	XXXIX	357	LII	424	LXV	1204		

D

The commencement of each period of 80 years from B.C. 2561

B.C. 2561	2081	1601	1201	801	401	81	^{A.D.} 80	480	880	1280	1680
2401	2001	1601	1201	801	401	1	160	560	960	1360	1760
2241	1921	1521	1121	721	321		240	640	1040	1440	1840
2081	1841	1441	1041	641	241		320	720	1120	1520	1920
2161	1761	1361	961	561	161		400	800	1200	1600	2000

E

The days on which the characters for January 1st occur

Common years	Leap years
March 2	March 1
May 1	April 30
June 30	June 29
August 29	August 28
October 28	October 27
December 27	December 26

F

The first year of each cycle of 19 years from 1860 to AD 1900

AC	419	229	89	133	325	513	702	893	1083	1273	1463	1653	1843
609	600	210	20	152	342	532	722	912	1102	1292	1482	1672	1862
590	381	191	1	171	361	551	741	931	1121	1311	1501	1691	1881
571	362	172	AD	190	380	570	760	950	1140	1330	1520	1710	1900
552	343	153	19	209	399	589	779	969	1159	1349	1539	1729	
533	324	134	38	228	418	608	798	988	1178	1368	1558	1748	
514	305	115	57	247	437	627	817	1007	1197	1387	1577	1767	
495	286	96	76	266	456	646	836	1026	1216	1406	1596	1786	
476	267	77	95	285	475	665	855	1045	1235	1425	1615	1805	
457	248	58	114	304	494	684	874	1064	1254	1444	1634	1824	

G.

Approximate Table of the first day of each moon for every year of the lunar cycle of 19 years

1	Jan 23	Feb 21	Mar 23	Apr 21	May 21	June 13	July 19	Aug 17	Sept 16	Oct 15	Nov 14	Dec 10	
2	Jan 12	Feb 10	Mar 19	Apr 10	May 10	June 8	July 8	Aug 6	Sept 5	Oct 3	Nov 3	Dec 2	
3	Jan 1	Jan 31	Mar 1	Mar 31	Apr 29	May 29	June 27	July 27	Aug 25	Sept 24	Oct 23	Nov 22	Dec 21
4	Jan 20	Feb 18	Mar 20	Apr 18	May 18	June 16	July 16	Aug 14	Sept 13	Oct 12	Nov 11	Dec 10	
5	Jan 9	Feb 7	Mar 9	Apr 7	May 7	June 5	July 5	Aug 3	Sept 2	Oct 2	Oct 31	Nov 30	Dec 29
6	Jan 29	Feb 28	Mar 28	Apr 26	May 26	June 24	July 24	Aug 22	Sept 21	Oct 20	Nov 19	Dec 18	
7	Jan 17	Feb 15	Mar 17	Apr 15	May 15	June 13	July 12	Aug 11	Sept 10	Oct 9	Nov 8	Dec 7	
8	Jan 6	Feb 4	Mar 6	Apr 5	May 4	June 3	July 2	Aug 1	Aug 30	Sept 29	Oct 28	Nov 27	Dec 26
9	Jan 26	Feb 23	Mar 26	Apr 23	May 23	June 21	July 21	Aug 19	Sept 18	Oct 17	Nov 16	Dec 15	
10	Jan 14	Feb 11	Mar 14	Apr 11	May 11	June 10	July 10	Aug 8	Sept 7	Oct 6	Nov 5	Dec 4	
11	Jan 3	Feb 1	Mar 3	Apr 1	May 1	June 29	July 29	Aug 27	Sept 26	Oct 25	Nov 24	Dec 23	
12	Jan 21	Feb 20	Mar 22	Apr 20	May 20	June 18	July 18	Aug 16	Sept 15	Oct 14	Nov 13	Dec 12	
13	Jan 11	Feb 9	Mar 11	Apr 9	May 9	June 7	July 7	Aug 5	Sept 4	Oct 3	Nov 2	Dec 1	
14	Jan 30	Feb 28	Mar 30	Apr 28	May 28	June 26	July 26	Aug 24	Sept 23	Oct 22	Nov 21	Dec 20	
15	Jan 19	Feb 17	Mar 19	Apr 17	May 17	June 15	July 15	Aug 13	Sept 12	Oct 11	Nov 10	Dec 9	
16	Jan 8	Feb 6	Mar 8	Apr 6	May 6	June 4	July 4	Aug 2	Sept 1	Oct 1	Oct 30	Nov 29	Dec 28
17	Jan 27	Feb 25	Mar 27	Apr 25	May 25	June 23	July 23	Aug 21	Sept 20	Oct 19	Nov 18	Dec 17	
18	Jan 16	Feb 14	Mar 16	Apr 14	May 14	June 12	July 12	Aug 10	Sept 9	Oct 8	Nov 7	Dec 6	
19	Jan 5	Feb 3	Mar 5	Apr 3	May 3	June 2	July 1	July 30	Aug 29	Sept 28	Oct 27	Nov 26	Dec 25

The Twenty four divisions of the Chinese Year

小寒	Little Cold	Szean Han	Moderate (Cold)	Jan 6	小暑	Little Heat	Szean Shao	Moderate Heat	July 8
大寒	Great Cold	Tai Han	Great Cold	" 21	大暑	Great Heat	Tai Shao	Great Heat	" 21
立春	Spring begins	Kieh Chun	Spring begins	Feb 5	立秋	Autumn begins	Kieh Kien	Autumn begins	Aug 9
雨水	Rain water	Yen Shuey	Rain water	" 21	白露	White Dew	Chao Shao	Later Heat	" 24
驚蟄	Worms move	King choh	Worms move	Mar 6	秋分	Autumn middle	Ph. Lo	White Dew	Sep 9
春分	Spring middle	Chun Kuen	Spring middle	Mar 22	寒露	Cold Dew	Shao Kuen	Autumn middle	" 22
清明	Clear bright	King Ming	Clear bright	Apr 6	霜降	Frost descends	Han Lo	Cold Dew	Oct 9
立夏	Summer begins	Kieh Yen	Summer begins	" 22	立冬	Winter begins	Huang Kiang	Winter frost	" 21
小滿	Little full	Kieh Han	Summer begins	May 7	大雪	Great Snow	Kieh Kiang	Winter begins	Nov 8
芒種	Grain in the ear	Szean Muen	Little full	" 22	冬至	Winter middle	Szean Szean	Winter snow	" 23
夏至	Summer middle	Ming Chung	Grain in the ear	June 7	小大	Great Snow	Tai Szean	Great Snow	Dec 8
		Han Che	Summer middle	" 22			Tung Che	Winter middle	" 22

The Twelve Kiang or divisions of the Zodiac answering to our Zodiac Signs

Ancient
中國名 Chung Kiao Ming
Chinese names

Modern
西國名 Sakao Ming
European names

降	庚	Haang Low		白	羊	Ph Yang	The white sheep
大	辰	Ta Leang	The Great Dragon	金	牛	Kim oen	The Golden Ox
實	戌	Shah chin		陰	陽	Yen yang	The two Principles
鳥	酉	Shun Shoo	The Swallow's Head	巨	解	Kan Kien	The Crab
鳥	火	Shun Ho	The Swallow's Head	狐	于	Sze Kie	The Lion
鳥	尾	Shun Wei	The Swallow's Tail	霜	女	Shuang nan	The Virgin Maiden
壽	星	Shao Sing	The Star of longevity	天	解	Kien ching	The Celestial Balance
大	火	Ta Ho	The Great Fire	天	蠍	Taen Hie	The Celestial Scorpion
木	水	Kieh Maek	The Water of the Wood	人	馬	Sze Ma	The Man Horse
星	紀	Sing Ke	The Star of the Earth	人	雞	Oro Ke	A kind of Sheep or Goat
元	梅	Yuen Mei	The Plum Blossom	寶	雞	Han Kung	The Famous Hen
亨	亨	Kien	The Sun	亨	魚	Shuang Yu	The Two Fishes

The translation of names of the zodiac signs is so satisfactory that it is hardly possible to find any discrepancy in any reference to them simply as the names of certain stars or constellations without attributing to identify them.